

**GUIDELINES FOR THE Ph.D. DEGREE IN BIOCHEMISTRY AND MOLECULAR GENETICS
IN THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS**

UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE

I. GUIDELINE POLICY	2
II. THE GRADUATE EXECUTIVE COMMITTEE (GEC)	2
A. Role of GEC	2
B. Composition and Duties of GEC Members	2
1. Director of Graduate Studies (DGS)	2
2. Director of Admissions	2
3. Director of Curriculum and Exams	2
4. Associate Faculty Representative	2
5. Student Representative	2
III. FACULTY ADVISORS	2
A. DGS	2
B. Dissertation Research Mentors	3
1. Role of the Dissertation Mentor	3
2. Selecting a Research Mentor	3
a. General guidelines	3
b. Process	3-4
c. Laboratory Rotations	4-5
C. Dissertation Committee	5
IV. REQUIREMENTS FOR THE Ph.D. IN BIOCHEMISTRY & MOLECULAR GENETICS ----	5-9
A. Good Standing in BMG Program	5
B. Timeline to Degree	6-7
1. Enrollment	
2. Course Requirements	
C. Additional Requirements	7-9
1. Student Journal Club	
2. Seminar presentations	
3. Laboratory Rotations	
4. Teaching	
5. Ph.D. Qualifying Exam	
6. Annual Dissertation Committee Meetings	
7. The Dissertation and Defense	

Appendix A –Presentation and Exam Guidelines

Laboratory Rotation Reports and Talks	10-12
Ph.D. qualifying Exam	14-16
Exam IIa/IIb	17-18
Dissertation Committee Responsibilities	19-20

Appendix B – Forms

Laboratory Rotation Selection	
Laboratory Rotation Evaluation	
Dissertation Mentor/Lab Request	
Dissertation Advisory Committee Member Appointment	
Annual Committee Meeting Report	

I. GUIDELINE POLICY

These guidelines represent the policies of the Department of Biochemistry & Molecular Genetics (BMG) regarding the doctoral (Ph.D.) program in Biochemistry & Molecular Genetics (BMG). The doctoral program is administered by the Graduate Executive Committee (GEC). This committee is responsible for reviewing the progress of the students, administering the qualifying exams and recommending changes in the program for approval by the faculty. In addition, the Department Chair, GEC, and all members of the faculty are available to assist students in their progress towards successful completion of the Ph.D. degree as well as assist students following graduation to achieve their career goals.

Students are expected to read and be familiar with all of the policies and requirements outlined herein. These guidelines do not supersede the academic policies of the School of Medicine Office of Graduate Studies and Postdoctoral Affairs (<http://louisville.edu/hsc/gradandpostdoc/graduate-students/som-minimum-guidelines>) or the policies of the School of Interdisciplinary Graduate Studies as outlined in the [Graduate School Catalog](#). Students are expected to familiarize themselves with the policies on academic standing, the statement of student ethics, and the requirements for obtaining graduate degrees at the University of Louisville.

II. THE GRADUATE EXECUTIVE COMMITTEE (GEC)

A. GEC is responsible for the administration of the academic program for Biochemistry and Molecular Genetics (BMG). The committee is charged with implementing changes in BMG curriculum and student policies upon request of faculty, the department Chair, or students. Any changes in the policies of the graduate program are made to reflect the current goals of the BMG Graduate Program. All changes must be approved by a majority BMG faculty vote and the Chair.

B. Composition and Duties

1. **Director of Graduate Studies:** Serves as Director of GEC and manages matters pertaining to the BMG graduate program. The DGS is responsible for informing the faculty and students of policies related to the BMG graduate program and School of Interdisciplinary Graduate Studies (SIGS), and revising policies related to graduate program based upon request of faculty or department Chair. The DGS serves as an advisor for all graduate students.

2. **Director of Admissions:** Responsible for screening applications and presenting candidates to GEC and IPIBS for approval. Acts as the liaison between applicants and GEC.

3. **Director of Curriculum and Exams:** Responsible for managing and monitoring the Exam I process. Works with course directors upon request of the departmental Chair to assist in course curriculum changes. Revises policies related to curriculum and exams based on faculty input.

4. **Associate Faculty Representative:** Serves as the liaison between joint faculty and the BMG department. Responsible for providing input on BMG policy.

5. **Student Representative:** Serves as the liaison between BMG students and GEC.

The members of GEC work as a team and all have a vote.

III. Faculty Advisors

A. The Director of Graduate Studies (DGS) for Biochemistry and Molecular Genetics (BMG).

The DGS will serve as the advisor for all incoming graduate students for the first year in the program until a Dissertation mentor is selected. The DGS serves as the liaison between the graduate students and the department, unit, and school. All student progress is monitored and approved by the DGS, the Graduate Executive Committee and Chair. The DGS is responsible for approving course registration, including drop/add, each term throughout the duration of the

program, and lab rotation and advisor selection requests. He/she is also responsible for notifying the School of Medicine Office of Graduate Studies and Postdoctoral Affairs and the Interdisciplinary Graduate Studies (graduate school) on student progress, e.g., advancement to PhD candidacy, MS degree application, and degree completion. It is the student's responsibility to keep the DGS informed their progress. This is best accomplished through scheduled annual advisory meetings.

B. Dissertation Advisor/Research Advisor/ Mentor

1. Role of the Dissertation Advisor (Mentor)

The Dissertation Advisor serves as the primary mentor¹ for the student throughout the duration of the program. The major responsibility of the Mentor is for research training and professional development.

Other responsibilities of the Mentor include: approval of any courses taken in year 3 or beyond and vacation leaves, and submitting written progress reports to the DGS and GEC after the annual Dissertation Advisory Committee Meetings (see Appendix A).

2. Selecting a Dissertation Advisor/Research Advisor/ Mentor

a. General Guidelines

The choice of a research Mentor is an important decision and the following criteria are provided as a guide.

- **What is the nature of the training in the laboratory?** *This includes but is not limited to the following questions. Will you be exposed to diverse research experiences? How much independence is expected? What is the accessibility and management approaches of the PI (mentor)?*
- **What is the lab's track record for publication?** *What is the record for student publications?* Part of the requirements for the PhD degree is at minimum a 1st author publication.
- **Support for the research.** Faculty members must contribute at least 2 years of the student financial support (years 3 -5 is expected). This is typically guaranteed by grant support. The faculty member must guarantee support for a student before the laboratory/mentor will be approved.
- **Training over research project.** The BMG faculty mission is to provide a strong foundation in the theoretical and experimental aspects of biochemistry and molecular biology. Our goal is to train you to apply the scientific approach to problem solving and to develop the skills of an independent, critical thinker. Our view is this goal transcends a particular research problem and the training you receive will transfer to any future research problem. As scientists, any good research question should spark excitement, therefore, you should talk with all faculty to learn of their research.

Consider also the following expectations for your training when selecting a mentor.

"Pre-doctoral training entails both formal education in a specific discipline and an apprenticeship in which the graduate student trains under the supervision of one or more investigators who are qualified to fulfill the responsibilities of a mentor. A positive mentoring relationship between the pre-doctoral student and the research mentor is a vital component of the student's preparation to become not only an independent and successful research scientist but also an effective mentor to future graduate students. Faculty who advise students are expected to fulfill the responsibilities of a mentor, including the provision of scientific training, guidance, instruction in the responsible conduct of research and research ethics, and financial support. The faculty mentor also performs a critical function as a scientific role model for the graduate student."²

¹ Mentor will be used to identify the faculty member who is directing the student's research and professional development.

² Excerpt from **Compact Between Biomedical Graduate Students and Their Research Advisors**

Adapted from the AAMC GREAT group guidelines (www.aamc.org/gradcompact)

Approved for circulation by the University of Louisville School of Medicine Graduate Council on March 2009

b. Dissertation Mentor Selection Process

During the first year all incoming students will meet with faculty to discuss research projects. This will be accomplished by scheduled **Research Interests of the Faculty (RIFs)** presentations and one-on-one meetings. The student will select a minimum of two laboratories for research rotations. One objective for the laboratory rotations is to provide an opportunity for students to experience diverse research environments and determine whether a potential mentor will be suitable for them as a Ph.D. dissertation research mentor. Equally, laboratory rotations afford students an opportunity to acquire research skills and new techniques. It is strongly recommended that a student complete rotations within the laboratories that they are considering for their dissertation research. This allows the student to become familiar with the laboratory and research projects before they commit to a laboratory and mentor.

The student is expected to have a Dissertation Mentor by the end of Spring term of the 1st year and no later than the end of the Summer term of year 1. Laboratory rotations are also important for faculty to assess a student's knowledge, research skills, motivation, work ethic, and how they might fit into their research program. If a student requires more than 3 laboratory rotations to find a laboratory, the student may request approval from the DGS to obtain additional laboratory experience. Any student still unable to find a research mentor before the start of Fall semester of Year 2 will be considered not to be making satisfactory progress towards their degree. It is the primary responsibility of each student to have a mentor, as the mentor and their lab resources are essential requirements for the student to make progress towards the Ph.D.

Once a potential dissertation mentor has been identified, it is the student's responsibility, in consultation with his/her Mentor, to complete and submit the **Dissertation Mentor/Lab Request** form to the DGS for approval by GEC and the Chair. The form must be signed by your mentor and submitted to the BMG DGS. The final approval for your lab selection is made by the BMG Department Chair.

Research Interests of the Faculty (RIFs)

Faculty members with positions available for students may give short research presentations to the student group during BMG orientation week, or individual meetings can be scheduled. The presentations will be scheduled for August and all incoming students are required to attend. The student should follow-up and schedule individual meetings with the faculty to further discuss their work. Use this opportunity to learn about various faculty members' research interests and ask questions that address the criteria for selection of a lab/mentor. Read publications from the lab (it is a good idea to do this before the meeting!) and also be sure to talk to students and postdocs in the lab.

A schedule for RIFs, individual faculty meetings, and rotation timelines and deadlines will be provided during BMG orientation week prior to the start of the Fall semester.

c. Laboratory Rotations:

All students are required to complete a minimum of 2 lab rotation and may take up to 3 rotations during their first year in the program. After participating in the RIFs and meeting with each faculty member, the student will consult with the DGS and select the laboratories he/she is interested in for rotations. The DGS, in consultation with the faculty, will set the rotation schedule for the cohort of students. Each rotation lasts approximately 6 weeks, for a minimum of 120 h (2 credit hr). The first rotation will begin in October, following completion of Biochemistry & Molecular Biology lab course (BIOC 611), and the second rotation will begin at the start of the Spring term. The DGS, in consultation with the faculty and students, will coordinate the match process.

d. Rotation Reports & Grading

A written report and departmental research presentation will be due at the end of each rotation. Guidelines for Lab Rotation Reports and Presentations are in Appendix A

Rotation reports should be submitted by the student to the Rotation Director and DGS on the day of the presentation.

Laboratory Rotations are graded Pass/Fail. The Rotation Director will complete a Laboratory Rotation Evaluation Form (Appendix B) and submit it to the DGS. In order to Pass the course, the student must successfully complete the written report. In cases where the faculty recommend revision of the written report, the student will have the opportunity to revise the report based on the critiques.

In the event a student receives a below average score in a category on the laboratory rotation evaluation, the student must meet with the DGS and Rotation Director and outline a remediation plan before the next rotation can begin.

Failure to adequately revise the written report or to outline a remediation plan will result in a Failure for the laboratory rotation.

C. DISSERTATION COMMITTEE

Doctoral dissertation committees shall be composed of a minimum of five qualified³ members that includes the Research Mentor. Three of the members must be primary BMG faculty and one member must be from outside the BMG department. Once a Research Mentor has been selected and the research project is underway, the student in consultation with the mentor will submit to GEC the names of five faculty members willing to serve on the student's Dissertation Committee. Since this dissertation committee must approve the student's research proposal, the committee should be appointed as soon as possible. Committees must be approved by GEC, the Chair of the Department and the Dean of the Graduate School. The student will submit the Thesis/Dissertation Advisory Committee Appointment form signed by the Dissertation committee to GEC for approval. The form should be completed during the first committee meeting required within 6 months of passing the Ph.D. qualifying exam (see Appendix B).

The role of the Dissertation Committee is to help advise students on their research, evaluate research progress, and approve the final dissertation. A copy of the guidelines for faculty serving on dissertation committees is in Appendix A

IV. REQUIREMENTS FOR THE Ph.D. DEGREE IN BIOCHEMISTRY & MOLECULAR GENETICS

During PhD training students receive considerable guidance from their mentor, committee, and faculty members of the department. However students need to recognize that individuals who pursue a biomedical graduate degree are expected to take full responsibility for their own scientific and professional development and to seek out and utilize all available resources for that goal.

A. Good Standing in BMG Program Requirement Overview

To complete a Ph.D. degree a student must remain in good standing within the BMG graduate program. The criteria for good standing in the graduate program are based on successful completion of milestones that indicate progression towards a degree. These milestones are outlined by the following requirements:

To be in good standing a student must successfully complete

1. all coursework with a minimum GPA of 3.0.
2. a minimum of two laboratory rotations.
3. serve as a teaching assistant for 1 semester.
4. two seminar presentations.
5. Exam I (Ph.D. qualifying exam).
6. Exam IIa and IIb (approved research proposal and committee meeting).

³ Must be a member of the School of Medicine Graduate Faculty. Graduate Research Training Faculty status is required before a faculty member is eligible to mentor students.

7. annual research conferences with committee meetings in years 3 and beyond.

Successful completion of Exams I, IIa, and IIb will be recognized by a modest increase in stipend.

To fulfill all requirements for the Ph.D. degree a student must

1. complete a body of novel research (dissertation).
2. publish at minimum one 1st author manuscript.
3. write and publically defend a doctoral dissertation that is acceptable by the dissertation committee and School of Interdisciplinary Graduate Studies.

In cases where student progress is deemed to be inadequate, a remediation plan may be considered. The timeline for remediation will be determined on a case-by-case basis with a maximum of 6 months before reassessment of student progress. In years 1 -2, the DGS will advise the student and outline specific milestones that must be met to return to good standing. In years 2-3 before selection of a dissertation committee, the DGS in consultation with the Dissertation mentor will work with the student to identify specific goals that must be met to return to good standing. In years 3 and beyond, the Dissertation Committee is responsible for monitoring student progress and developing remediation plans.

B. Timeline to Degree

1. Enrollment

Ph.D. students must be continuously enrolled at full-time status. 9 credit hours for Fall and Spring terms and 6 credit hours for Summer term is considered full time. A maximum of 12 hours is allowed for Fall and Spring terms and 9 hours for Summer term. Any additional coursework must be approved by the DGS and/or mentor.

The table shows the typical schedule for BMG Ph.D. students. During your tenure in the program, updated timeline can be found at

<http://louisville.edu/medicine/departments/biochemistry/programs/curriculum>

Year 1			Fall			Spring			Summer		
Required Courses	course #	course name	hr	course #	course name	hr	course #	course name	hr		
	BIOC 645	Biochemistry I	4	BIOC 647	Biochemistry II	4	BIOC 619	Research	(3-6)		
				BIOC 667	Cell Biology	3	BIOC 660	Data Analysis	1		
	BIOC 611	Adv Techniques in BMB	4	BIOC 630	Responsible Conduct of Research	1					
	BIOC 613	Lab Rotation	2	BIOC 613	Lab Rotation	2					
Other Requirments		Student Journal Club seminar attendance			Student Journal Club seminar attendance		BIOC 603-02	NGS and Data Analysis	1		
Year 2			Fall			Spring			Summer		
Required Courses	course #	course name	hr	course #	course name	hr	course #	course name	hr		
	BIOC 668	Mol Biol/Genetics	4	BIOC 620	Grant Writing	2	MAST600	Master's Candidacy			
	BIOC 680	Biomolecular Interactio	2	BIOC 619	Research	7					
	BIOC 606	seminar	1								
	BIOC 619	Research	3								
Other Requirments		Student Journal Club seminar attendance			seminar attendance						
					Ph.D. Qualifying Exam (Exam 1)						
Electives				BIOC 675	Cancer Biology	4					
				BIOC 661	Mol Toxicology	3					
Year 3			Fall			Spring			Summer		
enrollment	course #	course name		course #	course name		course #	course name			
	DOCT600	Doctoral candidacy		DOCT600	Doctoral candidacy		DOCT600	Doctoral candidacy			
Other Requirments		Seminar 2 Exam IIa			Exam IIb						
Years 4-5			Fall			Spring			Summer		
enrollment	course #	course name		course #	course name		course #	course name			
	DOCT600	Doctoral candidacy		DOCT600	Doctoral candidacy		DOCT600	Doctoral candidacy			
Other Requirments		Research Conference & Committee Meeting									

* Students must present annually. The Dissertation Defense is the final research conference and can be in any term

2. Course requirements

All BMG Ph.D. students are required to complete core classroom instruction in BIOC611 (4 h), BIOC645 (4h), BIOC647 (4 h), BIOC667 (3 h) BIOC 630 (1 h), BIOC668 (4 h), BIOC 680 (2 h), BIOC603-1 Statistics (2 h), and BIOC603-3 Grant writing (2 h), and one elective. A minimum of 30 credit hours by the end of year 2 is required to be eligible for Exam I and to enter Master's candidacy. This requirement is met ,. by completing seminar (1 h),and lab rotations (4 h. Research credit (BIOC 619) does not count toward the MS candidacy. One elective inside or outside of BIOC in the Spring semester of year 2 is required and the course selection should be made in consultation with the mentor.

3. Students are required to maintain a B (3.0) or higher average in their course work. A student who fails to maintain a B average will be placed on academic probation for one semester and will be subject to dismissal from the program after a second semester with an average below 3.0.

4. For students with previous graduate training, documented graduate level courses may be considered for fulfilling a course requirement. The student must make a formal written request and provide a syllabus for the equivalent course to the DGS. The DGS and Course Director will review the request and bring a recommendation to GEC for a final decision. The requirement for 30 credit hours for Exam 1 eligibility remains and BMG follows the SIGS **transfer credit rules** to accept up to 6 hours of graduate credit taken at an accredited institution that offers advanced degrees.

C. Additional Requirements

1. Student Journal Club Participation

2. Laboratory Rotations

See section III c and Appendix A.

3. Seminar presentations

Two seminars will be evaluated and the student will be provided with comments from faculty on strengths and weaknesses. Seminar 1 requirements include attending class sessions (BIOC 606) for instruction and analysis of seminar presentations. The first seminar must be on a topic unrelated to the student's research. The second seminar *may be on a topic related to the student's research*. Students receive a grade for seminar 1 that counts toward their GPA. Seminar 2 is evaluated but not graded. The evaluations for seminar 2 must reflect proficiency in scientific presentation. In the event that the faculty deem a student does not meet standards set for seminar presentations (provided in BIOC 606), a remediation plan will be required. It is the mentor's responsibility to develop the remediation plan and the dissertation committee's responsibility to evaluate satisfactory progress.

4. Teaching

All Ph.D. students are required to assist in teaching 4-5 hours per week for one semester during their 2nd or 3rd year. The 2nd year is preferable. This requirement is normally met by serving as a teaching assistant in BIOC 645, BIOC 647 or BIOC 611. The DGS will assign the TA duties after consultation with the students.

5. **Ph.D. Qualifying Exam (QE) (Exam I).** The purpose of this exam is to evaluate the student's assimilation of the fundamental principles of biochemistry and molecular biology and their ability to interpret literature, independently develop a research plan, integrate material from the graduate curriculum, write clearly, organize a proposal, and orally defend their ideas. It will help the student to develop the skills necessary for preparation and defense of their doctoral dissertations. Successful completion of the qualifying exam will be a strong indicator for successful completion of the Ph.D. The details and guidelines for the Ph.D. qualifying Exam are in Appendix A. Students will be awarded a M.S. in BMG upon successful completion of Exam I. The student must apply for the degree.

6. **Exams IIa and IIb: First Dissertation Committee Meeting (IIa) and Research Proposal (IIb).** Exam IIa is composed of 2 parts; selection and approval of a dissertation committee and holding the first committee meeting. The student will select a committee composed of 5 faculty with graduate faculty status and submit the committee form to GEC and the Chair for approval. Once a committee is approved the student will organize a committee meeting and submit to his/her committee a Specific Aims page (1 page) on their research 1 week prior to the scheduled meeting. The student will give a brief oral presentation on the SA for their proposed research to their committee, followed by Q and A session. The purpose of this formal step is for the Dissertation Committee to be introduced to the student and his/her project and provide direction early in the process. Since this step occurs in the Fall of the 3rd year, preliminary data are not the driving force for this meeting. Exam IIa must be held no later than six months after passing the PhD Qualifying Exam (November 30 deadline). Completion of Exam IIa will be documented by submission of a committee meeting report to the DGS for placement in the student's file. The report must be completed by the student and mentor, and signed by the committee members. Timely completion of Exam IIa is required to remain in good standing in Ph.D. candidacy.

Exam IIb is a written requirement for the student to submit a pre-doctoral fellowship proposal to his/her committee for approval. The committee will evaluate the proposal based on grantsmanship and research. Successful completion of Exam IIb will be documented in the Annual Progress Report. A copy of the proposal and critiques should be provided. The purpose for this requirement is to strengthen the writing skills of the student and to focus the student on his/her research goals. It is highly encouraged that the student submit the written proposal to an external agency for funding. Exam IIb must be completed within 4 months of

passing Exam IIa (March 1 of Year 3 deadline). This will provide time to submit to national agencies (NIH and AHA) that have April and July deadlines. Approval of the written proposal is required to remain in good standing in Ph.D. candidacy.

7. Annual Dissertation Committee Meetings

Every student must present a research conference and hold a committee meeting in the Fall of Year 4 and beyond. The DGS will schedule the research conferences and it is the student's responsibility to schedule the committee meetings. **The student is required to prepare a written progress report that must be distributed to their committee at least two weeks prior to the conference/meeting. It is expected that the mentor will provide guidance for the report. *The progress report should focus on the data collected or significant changes since the previous committee meeting.* The progress report should include an updated curriculum vitae. A copy of the progress report must be submitted to the DGS to be placed in the student's file.** Students experiencing significant difficulty in scheduling a committee meeting should contact the DGS for advice.

It is the responsibility of the committee members to determine at each meeting whether adequate progress is being made. It is at the discretion of the committee to determine whether more frequent meetings may be required. The student should schedule more frequent meetings when major new findings and/or changes in the research project warrant committee approval. It is the student's right to request more frequent meetings to take advantage of the committee members' expertise and guidance.

8. Documentation of Committee Meetings

A departmental record of annual student progress and committee meetings is required. This requirement will be fulfilled by submission of the annual progress report form. A copy of the report form (**ANNUAL Ph.D. GRADUATE STUDENT PROGRESS REPORT & COMMITTEE MEETING REPORT**) is in Appendix B. It is the responsibility of the Student to complete PART A. It is the responsibility of the dissertation mentor/advisor to complete PART B. The content of Part B should summarize committee member comments and contain specific feedback for the student to know the expectations and goals to be accomplished before the next meeting. **The report must be approved by all committee members and student. Approval is indicated by signature on the report. The signed annual report must be sent to the DGS within 1 week of the committee meeting.** The completed form is placed in the student's file and serves as a record to indicate progress in the program.

9. Dissertation and Defense

A dissertation consists of a complete and coherent body of work resulting in a significant, substantial, and novel contribution to the field of biochemistry and molecular biology. It is expected that the work will result in first author, peer-reviewed publications. At a minimum, one peer reviewed, first author publication should result from a student's dissertation.

The writing and defense of a Doctoral Dissertation is the final requirement for the Ph.D. degree. The Dissertation Committee and Chair of the Department must receive a completed copy of the dissertation at least two weeks prior to the expected date for the defense. It is the student's responsibility to inform the DGS and seminar director of the scheduled defense date at least two weeks prior to the defense. It is the DGS' responsibility to inform the School of Interdisciplinary Graduate Studies of the student's pending defense.

The dissertation must present data of sufficient quality and quantity so as to convince the Dissertation Committee that the student possesses the ability to pursue independent and original research. The student must defend the research protocol, results, and conclusions at an oral Dissertation Defense. To satisfactorily pass the dissertation defense, a student may not receive more than one unfavorable vote from a member of the Dissertation Committee.

The student is responsible for making final revisions of the written dissertation within the semester of the defense and prior to Graduate School deadlines for final submission of dissertations. Once the student has submitted the approved dissertation to the School of Interdisciplinary Graduate Studies, he/she has fulfilled all requirements for degree and is eligible to apply for the Ph.D. degree.

In the absence of a publication, the mentor must provide a written report that addresses why a publication has not resulted from the work and confirm that the dissertation indeed represents a significant advance of the field. The report must be approved by the Dissertation committee and submitted to the Chair of the Department. The Chair, in consultation with the Graduate Executive Committee, has the final approval for a student proceeding to a dissertation defense in the absence of a publication.

For the format of the dissertation, consult the current "Standards for the Preparation of Theses and Dissertations," published by the School of Interdisciplinary Graduate Studies. A copy is available online at the Graduate School's web site.

The department will cover the cost of binding 3 copies of the dissertation.

CHANGE IN GUIDELINES

When requirements change, a student has the option of satisfying either the requirements in effect when he/she entered the program or the current requirements.

Revised June 2017

Approved by the Graduate Executive Committee

Date: 06-26-17

Approved by BMG Faculty

Date: 08-02-17

GUIDELINES FOR LABORATORY ROTATIONS

THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE

I. Rotation Selection Procedures

- A. Research Interests of Faculty (RIF) presentations will be scheduled during BMG orientation week. Attend all of them.
- B. Meet with faculty you are interested in working with. You are required to talk to at least 4 RIF presenters before your first rotation.
 1. Use this opportunity to learn about various faculty members' research interests and ask questions about
 - a. potential projects available in the lab.
 - b. expectations for students during a rotation and as a student in the lab.
 - c. funding for students.
 2. Read publications from the lab (it is a good idea to do this before the meeting!) and also be sure to talk to students and postdocs in the lab.
- C. Schedule an advisory meeting with the DGS to discuss possible lab rotations.

D. Submit your Rotation Director Selection Agreement form to the DGS.

II. Rotation Schedule

A. Each rotation lasts approximately 6 weeks, for a minimum of 120 h (2 credit hr).

B. A written report and departmental research presentation will be due at the end of each rotation.

C. A timeline for rotations and presentations will be provided during BMG orientation week.

III. Rotation Reports & Grading

A. Rotation reports should be submitted to the Rotation Director and DGS on the day of the presentation.

B. Rotation reports will be critiqued by the DGS and one faculty member. Their comments will be returned to you to provide detailed feedback on your reports.

IV. Guidelines for Lab Rotation Report and Presentation

Use the following format as a guide for preparing your talk and report. Ask your rotation director for input and be flexible to incorporate suggestions to enhance the format.

Introduction (<1 pg in report, 2-3 slides for the talk):

- State the overall goals of the research in the lab
- Provide a brief background on the field/topic.

For example, if you are working on a nuclear receptor (or membrane receptor, kinase, miRNA etc.) explain the structure/function relationships and summarize the biological significance as it relates to the work in the lab

Project Overview (1-2 pgs in report)

- Background (1-2 slides)
State the purpose of the study (stated hypothesis)
Summarize your project goals and how the project fits in with the overall goals of the lab
If there is any preliminary data that is the basis for your project, briefly summarize the data in the report and present as bullet points in your talk. Do not show the preliminary data (work others did) in your talk.
- Experimental Approach (1-2 slides)
Describe the design for the experiments and the methods used during your lab rotation.
For example, to determine whether treatment x increased expression of mRNA/protein y, we used qRT-PCR and western blot analysis
- Data Presentation (1-2 slides)

Present a maximum of 2 data figures

Explain what we are looking at – take your time on this section

This is a western blot for protein X. Lane 1 shows.....

This is a graph of the quantitative qRT-PCR data. The white bars are control and dark bars are treatment. With treatment gene x expression increases 2-fold....

If you have more than 2 figures you must select what you want to present and summarize the remaining data in bullet point format.

If you have negative data, show it. If you do not have data to show, explain why. It is helpful to all to learn of technical or other problems encountered (we all have them)

For the report, the data figures should be embedded in the document with a legend. The 2 page limit for this section of the report does not include the figures.

Summary and Conclusions (1-2 slides)

- Provide a data summary
 - Include comments on your critique of the work/experiment/study
 - Comment on the strengths and weaknesses
 - State own conclusions – if you want to present a model at this point, go ahead. I suggest that you also present the model during the introduction.
 - Address how your work contributed to the project
- State 1-2 additional experiments you would perform next- and why

Acknowledgements

- List PI, lab members, funding

References

A bibliography is used only for the written report. There is no page limitation for the reference section.

- Use J. Biol. Chem. style
 - Examples taken from Instructions for Authors
- Cited in text by number and not by author, title, and/or date
- Titles should be included in references
- Numbered consecutively in the order of appearance
- References for journals and books should be in the following styles:
 - List all authors: Last name, initials
 - Journal Name: abbreviate according to Chemical Abstracts <http://www.cas.org/> (the abbreviations are preset in EndNote or Reference Manager)
 - page numbers are inclusive of 1st and last page.
 - Examples

1. MacDonald, G.M., Steenhuis, J.J., and Barry, B.A. (1995) A difference Fourier transform infrared spectroscopic study of chlorophyll oxidation in hydroxylamine-treated photosystem II. *J. Biol. Chem.* **270**, 8420–8428

2. Sambrook, J., Fritsch, E.F., and Maniatis, T. (1989) *Molecular Cloning: A Laboratory Manual*, 2nd Ed., Cold Spring Harbor Laboratory, Cold Spring Harbor, NY

3. *References appearing as e-pubs should be in the following style:* Aphasizheva, I., Aphasizheva, R., and Simpson, L. (April 1, 2004) RNA editing terminal uridylyl transferase 1: identification of functional domains by mutational analysis. *J. Biol. Chem.* 10.1074/jbc.M401234200

You should get EndNote or Reference Manager on your computer.

Go to https://itechxpress.louisville.edu/software/eresales/customer/free.php?free_cat=9 and download the free software

B. References on slides for a talk

- always cite the primary source for any data or models used

A common example is using a figure from a review paper for an established pathways or mechanism.

- if you generate your own figure based on concepts that originate from other work, always cite that work

include first author, year, journal, vol., page.

G.M. MacDonald *et.al.* (1995) *J. Biol. Chem.* **270**, 8420.

IV. Timing your talk

You should be prepared to give a 12 minute talk followed by 5 min of Q and A. The above guidelines suggest a maximum of 11 slides, giving you ~ 1 minute per slide. This is good. You should plan on spending more time on the experimental design, data presentation, and summary and conclusions sections. Once you have this section prepared, you can gauge how much time you have to present the introduction and background.

Good luck!

Revised July 2012

Approved by the Graduate Executive Committee

Approved by BMG Faculty

Date: 08-01-12

Date: 09-25-12

GUIDELINES FOR THE Ph.D. QUALIFYING EXAM (Exam I)

THE DEPARTMENT OF BIOCHEMISTRY & MOLECULAR GENETICS UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE

PURPOSE

The purpose of the Ph.D. Qualifying exam (Exam I) is to evaluate the student's ability to interpret literature, develop a research plan, integrate material from the graduate curriculum, display core knowledge of biochemical principles, and orally defend his/her ideas. It will help the student to develop the skills necessary for preparation and defense of his/her doctoral dissertations. Successful completion of the Exam I will be a strong indicator for successful completion of the Ph.D.

ELIGIBILITY

The student must have completed all of the graduate course requirements with a GPA of 3.0 or better to be eligible to take the QE. The BIOC 603 Scientific Method and Grant Writing course is designed to guide the students through the proposal writing process. This course is taken in the Spring semester of the 2nd year in the Ph.D. program.

FORMAT

The Qualifying exam will consist of 2 parts: an oral defense of the research proposal and a chalk-talk question and answer session focused on biochemical/genetic principles. The written proposal developed in BIOC-603 Scientific Method and Grant Writing course will serve as the starting point for the first part of the Qualifying exam.

1. Oral Defense of the Research Proposal The student will prepare and present an overview of the proposal to the QE Committee. Each proposal will be assigned a primary reviewer from the QE committee who will provide a written critique. The student will be given the critique one (1) week prior to the oral examination and must address all concerns raised in the critique during their oral presentation/defense. **The presentation may not exceed 30 minutes.** The committee will then begin a question period focusing on clarifications and weaknesses identified in the proposal and presentation. The purpose is to probe the student's understanding of the rationale, experimental design, and the experimental procedures in the proposal. After this round of questioning there will be a break (no longer than 30 min., time to be determined by the committee) for the committee members to select the topic areas and the questions that will constitute the second part of the exam.

2. Chalk-talk Q & A session.

The student will be asked general question and will use the white board to help illustrate their answers. The questions for the Q & A session will draw from the major topic areas covered in the graduate curriculum:

Protein, nucleic acid, carbohydrate, and lipid structure and function

Enzyme mechanisms/kinetics

Chromatin structure and gene expression

Molecular cloning and protein expression

Structure -function relationships for RNA and proteins

Mechanisms for RNA and protein synthesis & degradation

Genetics and genomics

Signal transduction mechanisms

Metabolism

Experimental design, hypothesis formation, and interpretation of results

3. Objectives

Exam Objectives:

- To evaluate the student's ability to orally defend his/her scientific ideas with appropriate approaches and sound rationale.

- To probe the student's knowledge of basic biochemical, molecular biological and genetic principles to problem solving in the biomedical sciences.
- To determine the student's ability to integrate their core knowledge of biochemistry, molecular biology, and genetics to address novel questions.

Learning Objectives:

a For the oral defense of the research proposal the student is expected to

- Integrate material from across the graduate curriculum, display core knowledge of biochemical principles, and orally defend his/her ideas.
- Apply the basic principles of biochemistry, molecular biology, and genetics to address questions that extend from the proposal.
- Discuss anticipated results, potential problems, and alternative approaches.
- Evaluate the impact of the proposed study and future direction of the work.
- Explain the advantages and limitations of experimental approaches proposed.

b. For the chalk-talk Q & A session the student should be prepared to explain and discuss

- The consequences of a posttranslational modification(s) of a protein on the structure and/or function.
- Principles driving RNA and protein folding, protein:protein and protein:DNA interactions.
- Mechanisms that control changes in RNA and/or protein expression levels.
- How to determine the mechanism by which a small molecule inhibits enzyme activity.
- The best approach to develop an antibody to a newly identified protein.
- Genetics as it applies to Mendelian disorders and complex diseases.
- Comparative genomics.
- Genomics as it applies to architecture of genomes and personalized medicine.
- The biochemical principles driving chromatin architecture/remodeling.
- Gene organization.
- Biological functions and metabolism of lipids and carbohydrates.
- Experimental approaches to test for changes in RNA and/or protein expression levels.
- Experimental approaches to manipulate RNA and/or protein expression in cells and animal models.
- Principles that control glucose homeostatic mechanisms

4. Evaluation.

a. Oral defense of the proposal

The oral defense of the proposal will be evaluated for clarity, completeness, and handling of general questions. Each committee member will vote on pass-fail and a majority (3 out of 4) pass votes are required to pass this section of the exam. Successful completion of this portion of the Exam is a prerequisite for continuing with the chalk-talk question and answer section.

b. Chalk-talk Q & A Exam

The questions will focus on basic principles of biochemistry, genetics, and molecular biology. The committee members will ask a series of questions to probe the depth of understanding of the fundamental principles in BMG as outlined in the learning objectives. The responses will be evaluated for clarity, completeness, and demonstration of in-depth understanding of the methods and research approaches being addressed, as well as the rationale, principles, and experimental designs that support these research directions. Each committee member will vote pass or fail, and a majority (3 out of 4) pass votes are required to pass this section of the exam.

A student must have a majority of pass votes for both sections of the exam to pass Exam I and enter Doctoral Candidacy

5. PASS/FAIL

The QE Committee Chair will inform the Director of Graduate Studies (DGS) of the results of the

examination.

- a. Students who pass all parts of the qualifying exam will enroll in DOCT600 the following term. The Exam 1 committee Chair will inform the DGS of the Exam 1 results in writing by e.mail. Students who pass all parts of the qualifying exam (Exam 1) will receive a \$500.00 annual pay raise.
- b. Any student who does not pass any part of the qualifying exam will typically be given a remediation plan and may be eligible to retake any or all parts of the Exam.

It is the discretion of the QE committee to determine the student's level of deficiency. The committee will make a recommendation that either the student receive a terminal M.S. degree or be given a remediation plan.

Remediation plans are unique to each student and are developed by the QE committee.

- Failure of the oral defense of the written proposal may result in a terminal M.S. degree or the option to retake the exam in the following year.
- The remediation period for retaking the Q & A part of Exam 1 will be limited to 3-4 months, and must be completed by September 30th. It is expected that the student will remain on the established timeline for completing Exam IIa by the November deadline of the same year.

Any student who does not pass the exam after completing their remediation will be awarded a terminal M.S. degree.

Students must pass Exam 1 before they are eligible for Exam IIa.

EXAM I COMMITTEE MEMBERSHIP

Faculty members are nominated by the Graduate Executive Committee (GEC) and confirmed by faculty vote to serve on the Exam I committee. The appointments will typically be for 3 years and the committee membership terms are staggered to have a mix of experienced members and new members with a goal to provide continuity across years. The committee will be composed of at least 4 faculty, and will not exceed 5 faculty, for an individual student's committee. The students will be informed of the faculty members who will be on their qualifying exam committee no later than 1 month prior to the exam.

PROPOSAL TOPIC AND WRITING

1. Topics will be selected by the faculty. The topic will be given to the student by the Course Directors of BIOC 603 Scientific Method and Grant Writing on the first day of class.
2. The student may seek advice and suggestions from **any faculty member, including the student's mentor**. However, the proposal must be conceived and written independently.

FORMAT FOR FULL PROPOSAL

The written proposal will follow the NIH pre-doctoral fellowship format. Use 0.5 inch margins, Arial 11 point font, standard single-spacing and organize your proposal as outlined below.

Revised January 2018
Approved by the Graduate Executive Committee
Approved by BMG Faculty

Date: 1-11-18
Date: 2-06-18

**GUIDELINES FOR THE 1st COMMITTEE MEETING (Exam IIa)
& Ph.D. DISSERTATION RESEARCH APPROVAL (Exam IIb)
DEPARTMENT OF BIOCHEMISTRY & MOLECULAR GENETICS
UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE**

EXAM IIa

PURPOSE

The purpose is to establish a Dissertation Committee and introduce the Committee to the student early in the education process. Since this step occurs in the Fall of the 3rd year, preliminary data are not the driving force for this meeting.

PROCESS

The format is for the student to submit to his/her committee the Specific Aims page (1 page) summary of the overall research plan 1 week prior to the committee meeting. Exam IIa must be held no later than six months after passing the PhD Qualifying Exam (November).

The committee meeting will consist of a question and answer period in which committee members will probe the student's understanding of the literature and research project. The dissertation mentor should coordinate the process but allow the student to discuss the research. The meeting is expected to result in a research plan for Exam IIb Dissertation committee.

Completion of Exam IIa will be documented by submission of a committee meeting report to the DGS for placement in the student's file. The Dissertation mentor will submit to the Director of Graduate Studies (DGS) the Committee Meeting Report form containing a written report summarizing the committee meeting and expected outcomes for the student. The report must be completed by the student (Part A) and mentor (Part B), and signed by the committee members. The report must be accompanied by the completed Thesis/Dissertation Advisory Committee Appointment form signed by the Dissertation committee.

Timely completion of Exam IIa is required to remain in good standing in Ph.D. candidacy.

Exam IIa checklist

1. Submit a completed Thesis/Dissertation Advisory Committee Appointment form (must be signed by all Dissertation committee members) to the DGS and departmental office.
<http://louisville.edu/medicine/departments/biochemistry/graduate-program-forms> - Committee appointment form
2. Receive confirmation of GEC and departmental Chair approve the committee (e.mail)
3. **Schedule a committee meeting to be held prior to Nov. 30th**
4. Submit a specific aims page to your committee 1 week prior to the committee meeting
5. Give an oral presentation of your research project to the committee
6. Submit a completed progress report to the DGS and departmental office – note the form is to be signed by all committee members
<http://louisville.edu/medicine/departments/biochemistry/graduate-program-forms> -

EXAM IIb

PURPOSE

The purpose is twofold: 1) to engage the Dissertation Committee early in the process, and 2) to strengthen the writing skills of the student and to focus the student on his/her research goals. It is highly encouraged that the student submit the written proposal to an external agency for funding.

PROCESS

The student will submit a pre-doctoral fellowship proposal to his/her committee for approval. The committee will evaluate the proposal based on grantsmanship and research. Successful completion of Exam IIb will be documented by submission of copy of the approved proposal. Exam IIb must be completed within 4 months of passing Exam IIa. This will provide time to submit to national agencies (NIH and AHA) that have April and July deadlines. Approval of the written proposal is required to remain in good standing in Ph.D. candidacy.

REPORTING

Either the student or the mentor must submit a copy of the approval research proposal to the DGS by e.mail to be placed in the student's file. The student's mentor must submit an email to the DGS and copy the committee members to confirm the proposal has been approved.

Exam IIb checklist

1. Submit a research proposal (predoctoral fellowship format) to your committee by Feb. 1st.
2. Submit a revised research proposal to your mentor before the end of February.
3. Submit an approved written proposal to the DGS and departmental office before the end of March. The student's mentor must submit an email to the DGS and copy the committee members to confirm the proposal has been approved.

Students will receive a pay raise (\$500.00) after the DGS has received both the approved proposal and email confirmation from the mentor that his/her student has fulfilled the requirements for Exam IIb.

The DGS will schedule your research conference for Aug. – Sept. of year 4- you will be responsible to organize a committee meeting within this timeframe.

Maintaining Good Standing in the Program:

In the event that the written proposal is inadequate or there are significant deficiencies identified during the presentation and question and answer session of Exam IIa meeting, it will be at the discretion of the Dissertation committee to formulate a remediation plan or to recommend to GEC and the Chair of the Department that a student be terminated from the program for failure to make progress. In the event of the decision for remediation, the plan must be detailed in the Committee Meeting Report. It is at the discretion of the committee to determine the required time for the remediation, but a second meeting must be held within 6 months to monitor progress. Lack of progress during the remediation period due to insufficient effort or inadequate scientific aptitude on the part of the student may constitute grounds for cancellation of stipend support or termination from the Program.

PROPOSAL FORMAT

The student and mentor will select a national agency most appropriate for submission of a fellowship application for the research. The fellowship guidelines must require a minimum of 6 pages containing Specific Aims and Research Strategy sections. The student is expected to follow the guidelines provided by the agency for organization of the proposal. Typically, 0.5 inch margins, Arial 11 point font, standard single-spacing will be used. In addition, the student must submit a curriculum vitae, personal statement, and research goals for year 1 as part as of Exam II. Again, guidelines provided by the funding agency should be followed and this process should be closely monitored by the mentor.

Revised May 2017

Approved by the Graduate Executive Committee

Approved by BMG Faculty

Date: 06-26-17

Date: 08-02-17

GUIDELINES FOR DISSERTATION COMMITTEES

THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE

I. Summary of Responsibilities

Committee Roles:

- Oversee and evaluate student's progress in research
- Assist student in timely completion of project
- Assure high quality of dissertation
- Recommend changes in student's status
- Read and evaluate dissertation

Committee Responsibilities:

- Evaluate progression towards degree by participating in annual committee meetings
- Critically and fairly evaluate student progress and make appropriate recommendations for the committee reports
- Provide expertise to assist student with specific approaches and methodology
- Approve transition from bench work to dissertation writing
- Evaluate and provide corrections to final dissertation

Student Administrative Responsibilities:

- Organize annual committee meetings
 - o Schedule 1st committee meeting within 6 months of passing Exam 1
 - o Distribute research proposal / progress reports for committee meetings at least 2 weeks prior to the meeting.
- Schedule dissertation defense date and inform DGS of defense at least two weeks prior to the defense (see section III)
- Complete final revisions of the written dissertation within the semester of the defense and submit to the Graduate School prior to deadlines for final submission of dissertations.
- Apply for degree

Department Responsibilities:

- DGS must submit to the School of Interdisciplinary Graduate Studies the student's pending defense at minimum two weeks prior to the defense.
- Chair must approve the dissertation.

II. Committee Meetings- Timelines and Documentation

By the end of the second year in the Ph.D. program, a Dissertation Committee will be formed which will serve as the Reading Committee and Examining Committee for the student. The Committee will consist of the mentor, three other faculty from the Biochemistry Department (at least three Committee members must be primary faculty in Biochemistry), and one member outside of the Department. The committee's composition must be approved by the Graduate Executive Committee (GEC).

The role of the dissertation committee is to oversee the student's progress in the program, specifically progress towards timely completion of the dissertation research. The committee may offer advice and recommend changes in direction of the research should they feel such changes are necessary for timely completion of a high quality dissertation. Ultimately, it is the committee's responsibility to evaluate student progress in terms of Departmental expectations for the dissertation. Specifically, the dissertation should be an original piece of research of high quality and publishable in a peer reviewed journal.

Each student must meet regularly with his/her Dissertation Committee. There must be at least one formal meeting per year and the first Committee meeting must be held no later than six months

after passing the PhD Qualifying Exam (Exam 1). After each meeting, the mentor must complete the Part B of the ***Committee Meeting Progress Report***. The content of this document should summarize committee member comments and contain specific feedback for the student to know the expectations and goals to be accomplished before the next meeting. **The report must be approved by all committee members and student. Approval is indicated by signature on the report. The signed annual report must be sent to the DGS within 1 week of the committee meeting.** The completed form is placed in the student's file and serves as a record to indicate progress in the program.

The Dissertation Committee is responsible for monitoring the student's research and professional development progress. Ultimately, it is the committee's responsibility to determine whether a student remains in good standing in the program. If deficiencies are identified during a meeting, the *Committee Meeting Progress Report* must contain a remediation plan with the areas of weakness identified and the expectations outlined for the next review period. It is at the discretion of the committee to determine the remediation period and whether more frequent meetings are required. Lack of progress during the remediation period due to insufficient effort or inadequate scientific aptitude on the part of the student may constitute grounds for cancellation of stipend support or termination from the Program. The dissertation committee has the authority to recommend to GEC and the Chair of the Department that a student be terminated from the program for failure to make progress, or be given the option of leaving the program with an MS degree.

When the student and mentor believe work for the dissertation is almost complete, they will call a meeting of the committee to obtain approval and guidance for preparation of the written dissertation.

When a dissertation defense date has been set, the student must complete the following:

- submit the dissertation to the Dissertation committee members and department Chair at least two weeks prior to the defense date.
-
- inform the DGS and seminar director of the scheduled defense date at least two weeks prior to the defense. The DGS must submit an online form to the School of Interdisciplinary Graduate Studies confirming the student's dissertation defense at minimum two weeks prior to the scheduled defense.
- Therefore, it is the student's responsibility to submit to the DGS the following information at least two weeks prior to the scheduled defense:

Student's name (as you want to appear on announcements), mentor's name, committee member names, title of dissertation, defense date/time/location.

The student is responsible for making final revisions of the written dissertation within the semester of the defense and prior to Graduate School deadlines for final submission of dissertations. Once the student has submitted the approved dissertation to the School of Interdisciplinary Graduate Studies, he/she has fulfilled all requirements for degree and is eligible to apply for the Ph.D. degree.

Revised July 2013

Approved by the Graduate Executive Committee
Approved by BMG Faculty

Date: 07-29-13
Date: 08-20-13

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS

ROTATION DIRECTOR REQUEST AND BRIEF PROJECT DESCRIPTION

Student _____

Rotation Director _____

Date _____

Brief Project Description:

GRADUATE EXECUTIVE COMMITTEE:

Your request for _____ to do a research rotation in your laboratory has been approved by the Graduate Executive Committee. The student should work in your laboratory a minimum of 120 hours during the semester, submit a written report on the research on the day of the presentation, and give a 15-minute oral presentation to the department.

APPROVAL: _____

DATE: _____

LABORATORY ROTATION EVALUATION

**THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS
UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE**

Student's Name: _____

Date: _____

Laboratory Rotation Director: _____

Please use the following to rate the student's performance in your laboratory. If you mark any category below average, please summarize the specific areas for improvement.

	Below Avg	Avg	Good	very good	Excellent
mastery of fundamental knowledge of the project					
basic laboratory technique					
creative thinking ability					
work ethic/attitude					
independence					
ability to work in a group setting					

**DEPARTMENT OF BIOCHEMISTRY & MOLECULAR GENETICS
REQUEST FOR DISSERTATION ADVISOR/LAB**

Student: _____

Mentor: _____

Date: _____

Funding Source: _____

Brief Project Description:

Approved: _____
Mentor

Approved: _____
Ronald G. Gregg, Ph.D.
Department Chair

Approved: _____
Barbara J. Clark, Ph.D.
Director of Graduate Studies

**Department of Biochemistry & Molecular Genetics
UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE**

**ANNUAL Ph.D. GRADUATE STUDENT PROGRESS REPORT
& COMMITTEE MEETING REPORT**

A departmental record of annual student progress and committee meetings is required. It is the responsibility of the Student to submit completed PART A to his/her research mentor and dissertation committee at the annual committee meeting. It is the responsibility of the student and dissertation mentor/advisor to submit a completed form (PARTS A & B) to the Graduate Executive Committee following each meeting.

Date: _____

Mentor: _____

Student: _____

Committee Members: _____

PART A

COURSEWORK COMPLETED (circle) **YES** Term _____ NO

REGISTERED IN CANDIDACY (circle) **MS** Term _____ **PHD** Term _____ NO

APPLIED FOR MS **YES** Term _____ NO

QUALIFYING EXAM COMPLETION _____
(month/year)

ANTICIPATED PROGRAM COMPLETION _____
(month/year)

RESEARCH ACTIVITIES _____
(Year)

Please list all activities for the current review year

- A. Departmental Presentations (list title/month/year of seminars, research conferences)
- B. Publications
- C. Abstracts
- D. Meetings/Symposia Attended
- E. Honors and Awards
- F. IDP completed / updated (attach)
- G. c.v. (attach)

PART B

Please circle or check responses

Type of meeting

1st Committee Meeting Annual Committee Meeting Remediation Meeting

Student Progress

Select all that apply

- Student is in good standing_____
- Student requires remediation (plan outlined below)_____
- Student is not making satisfactory research progress_____.

Report

(Briefly summarize the committee discussion and provide goals for the student. If the committee votes that the student is not making satisfactory progress and recommends remediation, the report must contain specific concerns that the student is expected to address over the remediation period)

Evaluation of written report:

Evaluation of oral presentation:

Committee Recommendation

Committee Signatures

UNIVERSITY OF LOUISVILLE

DEPARTMENT OF BIOCHEMISTRY and MOLECULAR GENETICS

FOR YOUR INFORMATION:

REGISTRATION: Dr. Clark serves as advisor to all first year students.

HOLIDAYS & BREAKS: The official University of Louisville Holiday Schedule and term breaks for 2017-2018 is as follows:

2017

Classes Start	August 21st
Labor Day	September 4th
Mid-Term Break	October 9th-10th
Thanksgiving Holiday	November 22nd-26th
Term Ends	December 12th
Winter Break	December 25 th – January 1st

2018

Classes Start	January 8th
Martin Luther King Day	January 15th
Spring Break	March 12 th – 16th
Term Ends	May 1st
Memorial Day	May 28th
Independence Day	July 4th

SCHOOL OF INTERDISCIPLINARY AND GRADUATE STUDIES

graduate.louisville.edu

Department of Biochemistry & Molecular Genetics

Policy on Vacation, Sick Leave and Family Leave for Pre-doctoral Fellows

In the absence of a specific University Policy from the Department of Human Services or Graduate School, the Department of Biochemistry and Molecular Genetics, University of Louisville School of Medicine will adopt the policies concordant with the School of Interdisciplinary Graduate Studie (see link below).

1. By faculty agreement, 2 weeks annual* vacation is allowed for pre-doctoral fellows, in addition to the other stated University holidays. Annual leave cannot be accumulated from year to year. Other arrangements may be made on a case-by-case basis by the mentor in consultation with the director of the Graduate Executive Committee and approval of the department chair. First year students should inform the Graduate Program Director of the timing of vacation leave at least two weeks in advance; after the first year, students should inform their graduate advisor/mentor of vacation leave two weeks in advance. The times for vacation leave must be approved by the advisor/mentor.
2. Pre-doctoral Fellows are allowed 15 days sick leave annually; sick leave cannot be accumulated from year to year. Illness in excess of 3 days will require documentation from a doctor in writing; in the absence of such documentation, the student will not receive pay for the days missed in excess of 3 days.
3. Pre-doctoral fellows may receive stipends for up to six weeks of parental leave per child for the adoption or the birth of a child. Either parent is eligible for parental leave. For those with outside fellowships, the use of parental leave may require approval by the sponsor (funding agency). If medical conditions warrant (see item 2 above) sick leave may be used when parental leave is exhausted.
4. Unpaid leave. Individuals requiring extended periods of time away from their research training experience, that is, more than 15 calendar days of sick leave or more than six weeks of parental leave, must seek approval for an unpaid leave of absence from the Dean of the School of Interdisciplinary and Graduate Studies (SIGS), with approval of the Department Chair and Associate Dean for Graduate Affairs.
5. Terminal leave. A period of terminal leave is not permitted, and payment may not be made from university funds for leave not taken

*For the purposes of this policy, annual is considered August 1 to July 31.

<https://sharepoint.louisville.edu/sites/SIGS/Documents/Graduate%20Student%20Leave.pdf>

Approved by the Faculty of the Department of Biochemistry and Molecular Genetics 07-03-2008