Guidelines for the preliminary examination in
Pharmacology and Molecular Cancer Biology
Updated- 1/14/16

Timing of preliminary examination
The preliminary exam is usually taken in the months of May and June of the second year, but must be successfully completed by the end of the third year. Successful completion of this exam is required to formally accept a student as a candidate for a Ph.D. degree. This exam is presided over by a committee comprised of two members from the standing Oral Prelim Exam Committee and two faculty members who will follow the student through their work and preside on their thesis exam committee.

After passing the prelim exam, graduate students must immediately confirm their thesis committee (see schedule his/her first committee meeting within one year, and subsequently every 6 months until the PhD defense.

Format of the preliminary examination
Students will write a proposal that would be suitable for submission to a granting agency (such as NSF, DOD, etc). The NIH predoctoral fellowship format, page guidelines, etc apply for this examination (NRSA form pages PHS 416-1). The student can write on his/her own research topic (or at least on the topic they think they will be following for their thesis research). Alternatively, students may choose to write a proposal on a subject unrelated to their research but in their chosen field of study. No preliminary data are required for the proposal and the students will not be evaluated on the quality of their preliminary data. Rather, it will be perfectly acceptable to submit an IDEA-type of grant (i.e., similar to the DOD Idea Awards) in which hypothesis-driven research based on information to be found in the literature is acceptable.

Proposals must be written in 11 point (or larger) Arial font. Figure legends can be written in 10 point Arial font. All borders must be a minimum of 1 inch. The proposal should include a face page denoting the student's name, thesis mentor, graduate program, title of project, date of and room of the preliminary exam. This should be followed by one page describing the specifics aims, followed by up to 9 pages describing the Background & Significance, Preliminary data and Experimental Approach. Figures must be included in the page limit. Following the proposal list references (please include the title of the paper in the citation). There is no page limit for references.

Students who decide to be examined on a proposal based on their research need only to submit a single abstract. If students elect to be examined on an alternative topic, they should submit two abstracts (as is currently the case). In either, the abstracts should be no longer than one page long and include a short introduction, hypothesis, research objectives and expected outcomes. The abstract must be submitted seven weeks prior to the prelim date. Students will then have to hand in the final written proposal 1-2 weeks before the examination. The proposal will be read and evaluated by the committee in sufficient time to turn it back to the student for re-submission should it be deemed too flawed for examination. The written proposal constitutes a significant portion of the preliminary exam outcome, but the bulk of the preliminary examination will be derived from their ability to answer questions and defend their ideas at the exam itself. To pass the exam, each committee member will consider the proposal and the oral defense of the proposal to evaluate the student's overall performance. Committee members then vote to determine if the result is pass or fail. More than one vote to fail results in failure of the exam. By putting the largest emphasis on the student's ability to both defend the proposal and demonstrate in-depth knowledge of areas broadly related to the proposal, we feel that this process will provide an objective evaluation of the students' progress. Students should be aware that we plan to assess their general knowledge in the area of their proposal and they should be able to discuss material covered in the required courses of their field of study. Finally it is proposed that the advisor will not be in attendance at the examination.

If the student does not pass the exam, they will have one chance to re-take it within the time frame indicated by the committee (3-6 months).

The prelim committee requests that the student's advisor be available prior to the closed session of the examination to introduce the student, and after the exam has been completed to learn of the decisions and recommendations of the committee members.

Contribution of the advisor and student to the thesis proposal document
The thesis proposal document is to be written by the student, with the guidance of the advisor. The advisor is encouraged to contribute to the content of the document to the extent that he/she feels is appropriate. The student is also encouraged to consult with other members of the thesis committee.
**Course Prerequisites and Requirements**

**PHARM Course Requirements**

PHARM 780 – Seminar – 4 Semesters
PHARM 533 – Essentials of Pharmacology/Toxicology
PHARM 534 – Interdisciplinary Approach to Pharm
PHARM/MOLCAN 733 - Experimental Design and Biostatistics for Basic Biomedical Scientists (**Required course for all graduate students but does not have to be taken before the prelim exam).  
PHARM 835 – Innovations- Drug Development  
**HIGHLY RECOMMENDED ELECTIVE:** MOLCAN 760 – Cellular Signaling

For students entering through the Integrated Toxicology program, Mammalian Toxicology-PHARM 554 (Abou-Donia) will substitute for PHARM 534 in the list of prerequisites.

**MCB Course Requirements**

MOLCAN 780 – Seminar – 4 Semesters  
MOLCAN 760 - Cancer biology I/ Cellular Signaling 
MOLCAN 818 - Cancer biology II/ Molecular Mechanisms of Oncogenesis 
MOLCAN 819 - Cancer as a disease 
PHARM/MOLCAN 733 - Experimental Design and Biostatistics for Basic Biomedical Scientists (**Required course for all graduate students but does not have to be taken before the prelim exam).

**MSTP/Pharm Course Requirements**

PHARM 780 – Seminar – 2 Semesters  
PHARM/MOLCAN 733 - Experimental Design and Biostatistics for Basic Biomedical Scientists (**Required course for all graduate students but does not have to be taken before the prelim exam).  
PHARM 835 – Innovations- Drug Development  
SELECT AT LEAST ONE OF THE FOLLOWING COURSES: 
PHARM 533 – Essentials of Pharmacology/Toxicology  
PHARM 534 – Interdisciplinary Approach to Pharm I  
**RECOMMENDED ELECTIVE:** MOLCAN 760 – Cellular Signaling

**MSTP/MCB Course Requirements**

MOLCAN 780 – Seminar – 2 Semesters  
MOLCAN 760 - Cancer biology I/ Cellular Signaling 
MOLCAN 818 - Cancer biology II/ Molecular Mechanisms of Oncogenesis 
MOLCAN 819 - Cancer as a disease  
PHARM/MOLCAN 733 - Experimental Design and Biostatistics for Basic Biomedical Scientists (**Required course for all graduate students but does not have to be taken before the prelim exam).

**CMB/Pharm Course Requirements**

PHARM 780 – Seminar – 2 Semesters  
PHARM 533 – Essentials of Pharmacology/Toxicology  
PHARM/MOLCAN 733 - Experimental Design and Biostatistics for Basic Biomedical Scientists (**Required course for all graduate students but does not have to be taken before the prelim exam).  
SELECT AT LEAST ONE OF THE FOLLOWING COURSES:  
PHARM 534 – Interdisciplinary Approach to Pharm I  
PHARM 835 – Innovations- Drug Development  
**RECOMMENDED ELECTIVE:** MOLCAN 760 – Cellular Signaling

**CMB/MCB Course Requirements**

MCB students are expected to complete the following courses prior to their Prelim exam:  
MOLCAN 780 – Seminar – 2 Semesters  
MOLCAN 760 - Cancer biology I/ Cellular Signaling  
MOLCAN 818 - Cancer biology II/ Molecular Mechanisms of Oncogenesis  
MOLCAN 819 - Cancer as a disease 
PHARM/MOLCAN 733 - Experimental Design and Biostatistics for Basic Biomedical Scientists (**Required course for all graduate students but does not have to be taken before the prelim exam).
RCR Training Requirement (18 hours total)
*Beginning SUMMER 2014, there is a new 4 hour course requirement after year three. Additional details can be found here:  (https://gradschool.duke.edu/academics/degree_reqs/rcr/requirements.php)

Basic Medical Science Track 18 hours total
RCR Orientation - Beaufort Retreat 12 hours
Graduate School or Dept. RCR Forums 2 hours
School of Medicine, 4-hour course, Year 3-4 4 hours

**Examination committee**
Two members of the prelim examination panel will be drawn from the standing preliminary examination committee. In addition, students will have to select two members of their future thesis committee to serve on their prelim exam committee. Students must submit the names of these two committee members at least three months prior to the exam so that scheduling conflicts can be avoided.

**Timeline for Prelim Exams**
Student proposes 2 prelim members – Deadline: At least 3 months prior to exam
Committee Approval by Dean of Graduate School – At least 30 days prior to exam
Prelim Exam Scheduled – Must be successfully completed before the end of your third year
Abstract due to committee – 7 weeks prior to the exam
Proposals due to committee – 1-2 weeks prior to the exam