

# Overview of the MD/PhD Program

The MD/PhD program is designed for students with a strong interest and background in basic and/or clinical research who plan to pursue careers in academic medicine, clinical research, etc. Students receive full-training in both medical and graduate school curricula culminating in both medical and doctoral degrees.

## **Medical School; Basic Science (Years 1 - 2)**

### *A. Core Curriculum*

MD/PhD students will follow the LSUHSC School of Medicine's curriculum during their 1st and 2nd years including Basic Sciences and Clinical Sciences coursework and clinical experience opportunities. More information regarding undergraduate medical education can be found [here](#).

### *B. MD/PhD Program Involvement*

Students are expected to perform at a high level during their Basic Sciences coursework. Honors, High Pass, and Pass grades of 80 or greater can transfer into the School of Graduate Studies. During the first year, students attend seminars in various basic science departments to learn more about research opportunities. In the summer following first year, students are required to complete an 8 week lab rotation in the lab that they are considering for completion of their graduate research. All students are required to attend a monthly MD/PhD forum. During forums, students discuss their ongoing research and clinical vignettes are presented.

### *C. Transition from Basic Science Medicine to Graduate Studies*

Following the completion of the Basic Sciences curriculum in the School of Medicine, most MD/PhD students will take the USMLE Step 1 exam prior to beginning Graduate Studies. Though not officially required, it is highly recommended that students take the USMLE Step 1 exam at the end of the second year as they will be best prepared for the exam at this time. While medical school classmates complete the 3rd and 4th years of Medicine, MD/PhD students diligently carry out their dissertation research. The transition can be difficult for many students. As MD/PhD students complete their research, their former classmates and friends will graduate from Medicine and begin residency training. Social networking with other MD/PhD and graduate students can significantly facilitate the transition.

## **Graduate Studies (Years 3 - 5+)**

### *A. Basic Requirements*

There are three general phases for completing a doctoral degree. These phases include a qualifying exam, a preliminary exam, and a doctoral dissertation defense. Each department fulfills these basic requirements in a slightly different manner. In general, the qualifying exam is both a written and oral exam on core concepts of the department. After successfully completing the qualifying exam, the student and his/her advisor will identify a research project and select a dissertation committee. Dissertation committee members oversee completion of the preliminary exam as well as the final dissertation defense. Preliminary exams are typically fulfilled by submitting an NIH style grant application to your dissertation committee members and defending your proposal in an oral exam. Upon completion of the Preliminary Exam, the student will complete the dissertation research and then write and defend his/her dissertation. Most departments additionally require the acceptance of at least one peer-reviewed journal article. Graduation requirements are found [here](#).

## *B. Selection of a Laboratory*

All MD/PhD candidates are required to complete an 8 week lab rotation during the summer between the first and second years of medical school. Selection of this laboratory will be based upon meetings during the fall semester of medical school during which each department will present an overview of the research in laboratories in their department. Several programs for summer research are available, and many offer stipends as part of their programs. The work completed during this rotation will be presented by the student in a research forum at the end of the summer. For additional information regarding research opportunities at LSUHSC please visit [here](#). Doctoral work must be completed in one of the seven basic science departments/programs: biochemistry & molecular biology, cell biology & anatomy, genetics, MIP (microbiology, immunology and parasitology), neuroscience, pharmacology & experimental therapeutics, or physiology. However, research can be completed in any LSUHSC laboratory as long as your primary mentor has a joint appointment in one of the basic science departments and is a member of the graduate faculty. Basic science departments can be found [here](#). Additional information regarding LSUHSC Centers of Excellence is available [here](#).

Selecting a lab to complete the doctoral degree is an important decision because the student will spend nearly half of their MD/PhD training working in that environment. Ask a lot of questions! Get to know personnel (students/postdoctoral fellows/research associates). It is important to inquire about past trainees, publications, funding history, requirements of the department, and expectations of the student. The value of feedback from past and current lab members and/or graduate students cannot be overstated. Selecting a lab implies selecting a mentor as well. Just as it is important to be able to work in a particular lab, it is as vital for the student to be able to work with his/her mentor. Students should discuss in detail expectations of the potential mentors for students in their lab. Please consult with MD/PhD program advisors and senior students about essential topics of discussion.

## *C. Transfer of Credit Hours from Medicine to Graduate Studies*

The School of Graduate Studies has its own curriculum requirements beyond those of the School of Medicine. MD/PhD students are required to meet these requirements in order to complete their doctoral work. However, twenty six credits from medical school Basic Sciences course work in which the student earned an 80% or above (typically a grade of Honors or High Pass) can be transferred. Transfer of credits lessens the course load needed to complete graduate school. Students should inquire about additional courses required by individual departments.

## *D. The Transition from Graduate Studies to Medicine*

Upon completion of your doctoral research, successful defense of your dissertation, and turning in two copies of your dissertation to the graduate school, MD/PhD students are encouraged to return to the medical school at the earliest possible convenience. Ideally, this would entail completion of your graduate career in the spring semester and joining the 3rd year class in the summer (late June or early July). There are other possible time-points to rejoin the 3rd year class depending on when you complete your graduate career. You should consult with your faculty advisors as to what options are available and recommended.



## **Frequently Asked Questions**

### *How is the Honors Program different?*

The Honors program is designed to supplement the medical school curriculum by providing high-achieving medical students the opportunity to perform research over the course of their training. The Honors program should be considered by medical students with a serious interest in clinical research but for whom a commitment to the full

graduate curriculum is not an option. Students in the honors program do not receive a PhD. Additional information regarding the LSUHSC School of Medicine Honors Program can be found [here](#).

*Is financial aid available for the MD/PhD program?*

All MD/PhD students receive tuition credits for Medicine and Graduate Studies. Materials not covered by the credit include books, study materials, university fees, health insurance, and living expenses. MD/PhD students receive a stipend working as graduate research associates after completing the first two years of medical school and are paid until graduation from the program. Student loans are available. For information on student loans please visit [here](#). Students should consider individual finances and consult with more senior students when considering additional student loans. MD/PhD students are encouraged to apply for grant opportunities through the National Institutes of Health or other organizations in order to supplement their research funding. Information about NIH funding opportunities for MD/PhD students is available [here](#).

*Will I be locked into a laboratory after my summer rotation or after joining a laboratory?*

You may decide that the laboratory in which you performed your summer rotation is not a "good fit." If this is the case you should consult with your faculty advisors about setting up additional rotation opportunities. It may happen that you join a laboratory only to find out that it is not a "good fit." You should consult MD/PhD program advisor and/or faculty advisors about your options in this case. MD/PhD students do not get as many opportunities for laboratory rotations as typical graduate students. It is imperative that you thoroughly research potential laboratories and mentors before committing to joining a laboratory.

*Is it possible to join the MD/PhD program after you begin medical school?*

Students may apply for acceptance in the MD/PhD program through the end of 2nd year. Most, if not all, students apply for the MD/PhD program as part of their application to the medical school. However, students have opted to apply to and join the MD/PhD program during 1st and 2nd year.

*What are the requirements to remain in good standing in the MD/PhD program?*

Students are required to maintain a 3.0 average in graduate school.

*Do I have to take additional courses as a graduate student?*

MD/PhD students must take, at a minimum, 15 hours of coursework while in graduate school – 2 of those hours must be two- one hour Ethics courses (INTER 220 and INTER 260). Students should also take a Proposal Writing course in order to submit a fellowship application.

*Where can I do research?*

Currently students in the program are located at the MEB, CSRB, Neuroscience Center, and Children's Research Institute.

*After defending my thesis, do I actually have a degree?*

Yes, you are a PhD when you turn in your completed and defended dissertation to the School of Graduate Studies. However, the diploma is not received until after degrees are officially conferred at the end of each semester.