

# Quick Facts for MD/PhD Students



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

### **A. Core curriculum**

MD/PhD students will follow the LSUHSC School of Medicine's curriculum during their first and second years including Basic Sciences and Clinical Sciences coursework and clinical experience opportunities. More information regarding undergraduate medical education can be found at [http://www.medschool.lsuhs.edu/medical\\_education/undergraduate/default.asp](http://www.medschool.lsuhs.edu/medical_education/undergraduate/default.asp).

### **B. Selection of MD/PhD or Honors Programs**

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. 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.

One of the principle differences between these opportunities is that in MD/PhD program, students receive full-training in both the medical and graduate school curricula culminating in both medical and doctoral degrees. 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. Additional information regarding the LSUHSC School of Medicine Honors Program can be found at <http://www.medschool.lsuhs.edu/honorsprogram/>.

### **C. MD/PhD program involvement**

All MD/PhD students are highly encouraged to perform at a high level during their Basic Sciences coursework. Honors or High Pass credits can transfer from the medical school to graduate school curriculum. Pass grades of 80 or greater can also be transferred. During the first year, MD/PhD students attend seminars in various LSUHSC basic science departments to learn more about available research opportunities. In the summer following first year, students are required to complete an 8 week laboratory rotation in the laboratory that they are considering for completion of their graduate research.

As members of the MD/PhD program, all students are required to attend a monthly student forum. During MD/PhD forums, students discuss their ongoing research, physician scientist-trained faculty members attend, and clinical vignettes are presented.

### **E. Finances (e.g., loans, tuition, stipends, etc.)**

All MD/PhD students receive a medical and graduate school tuition-waiver. Materials not covered by the waiver include books, study materials, university technology/parking/etc fees, health insurance, and living expenses. A living stipend is provided after completing the first two years of medical school and is paid until graduation from the program.

Student loans are available. For information on student loans please visit <http://www.lsuohsc.edu/no/students/financialaid/> Please consider your individual finances and consult senior students in the program for additional advice.

## **F. Transition from basic science medical school to graduate school**

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 school. 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 3<sup>rd</sup> and 4<sup>th</sup> years of medical school, MD/PhD students diligently carry out their dissertation research. The transition from medical school to graduate school is difficult for many MD/PhD students. As MD/PhD students complete graduate school, their former classmates and friends will graduate from medical school and begin residency training. Social networking with other MD/PhD and graduate students can significantly facilitate the transition.



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

### **A. Basic requirements.**

There are three general phases for completing a doctoral degree. These phases include a qualifying examination, a preliminary examination, and a final doctoral dissertation defense. Each department fulfills these basic requirements in a slightly different manner. In general, the qualifying examination is both a written and oral examination on core concepts of the department. After successfully completing the qualifying examination, the student and his/her advisor will identify a research project and select a dissertation committee. Dissertation committee members oversee completion of the preliminary examination as well as the final dissertation defense. Preliminary examinations are typically fulfilled by submitting an NIH style grant application to your dissertation committee members and defending your proposal in an oral examination. 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 at <http://graduatestudies.lsuohsc.edu/Graduation.htm>.

### **B. Selection of a laboratory.**

All MD/PhD candidates are required to complete an 8 week laboratory 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 <http://graduatestudies.lsuhs.edu/Research%20Opporunities.htm>.

Doctoral work must be completed in one of the eight basic science departments/programs; biochemistry and molecular biology, cell biology and anatomy, genetics, physiology, pathology, MIP (microbiology, immunology and parasitology), neuroscience, and pharmacology and experimental therapeutics. However, research can be completed in any LSUHSC laboratory as long as your primary mentor has a joint appointment in one of the abovementioned basic science departments and is a member of the graduate faculty. Basic science departments can be found at <http://graduatestudies.lsuhs.edu/Programs.htm> Additional information regarding LSUHSC Centers of Excellence is available at <http://www.lsuhs.edu/no/research/centers.htm>.

Selecting a laboratory to complete the doctoral degree is an important decision because the student will spend nearly half of his/her 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 laboratory implies selecting a mentor as well. Just as it is important to be able to work in a particular laboratory, 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 laboratory. Please consult with MD/PhD program advisors and senior students about essential topics of discussion.

### **C. Transfer of credit hours from medical school to graduate school**

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. Finances during graduate school**

MD/PhD students receive a living stipend while working as graduate research associates. It is anticipated that this stipend will cover all expenses. However, additional student loans are also available. 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 at <http://grants.nih.gov/grants/guide/pa-files/PA-05-151.html>.

## **E. The transition from graduate school to medical school.**

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 3<sup>rd</sup> year class in the summer (late June or early July). There are other possible time-points to rejoin the 3<sup>rd</sup> 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**

### **Do different departments pay different stipends to MD/PhD candidates?**

Living stipends begin upon your entrance into graduate school and continue until your final graduation from the MD/PhD program. The base stipend paid by the graduate school will not be affected by your selection of department.

### **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 2<sup>nd</sup> 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 1<sup>st</sup> and 2<sup>nd</sup> 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 Graduate School.