MD/PHD

Overview

Applicants interested in additional information on the Physician Scientist Program may contact medsch@tulane.edu (MD degree) and bms@tulane.edu (PhD degree)

Tulane brings together some of the nation's most talented young people with nationally- and internationally-recognized teachers and researchers: all in the context of a vibrant city replete with opportunities both in and out of the lab and classroom. Whatever studies you pursue, your learning will intersect with the city's unique mix of influences- ethnic, musical, architectural, geographical, commercial, political, environmental, and social. Beyond the classroom and lab, Tulane also provides you with multiple opportunities for career development and possible career exploration, both in and outside of academia. As a Tulane graduate student, you will find unmatched opportunities: opportunities to pursue ideas and work that matters to others, and opportunities to grow and mature.

The primary aim of the Physician Scientist Program (PSP) is to provide an integrated learning environment that supports the development of physicians committed to the advancements of the medical sciences. Students will acquire the necessary skills to become both sound clinicians and accomplished scientists. More importantly, it is intended to promote a view of medicine and science as unified endeavors rather than distinct disciplines.

There are two tracks ("A" and "B") that lead to a dual M.D./Ph.D. degree. All PSP students will complete 2 years of medical school, followed by 3-4 years in the BMS PhD program, followed by 2 years of medical school.

PSP-A students apply through the Medical School AMCAS application process for admission. Applicants cannot apply to the PSP-A program and Medical School. They must choose one.
- Competitive applicants have exceptional academic credentials and prior research experience.
- Accepted students receive a fellowship covering both medical and graduate school tuition costs.
- A stipend is paid for the duration of study in both the medical and graduate school portions.
- Accepted students must begin research lab rotations the summer prior to entry into medical school.
- Accepted students must complete both the MD and PhD degrees.

PSP-B students must have applied for and been accepted into Tulane Medical School. PSP-B students apply for the PhD program through the Biomedical Sciences application system any time after beginning medical school studies but no later than the end of their second year of medical school.
- Competitive applicants have exceptional academic credentials and prior research experience.
- Accepted students receive tuition remittance for the PhD portion of their studies (not MD portion).
- A stipend is paid for the duration of the PhD portion of the degree (not MD portion).
- Students should begin research lab rotations upon acceptance into the BMS program.

Requirements

Physician Scientist Program Requirements

Medical School Years 1 & 2 (MD-1, MD-2)

Our medical school first and second year curriculum provides the necessary foundation for graduates to be well prepared to enter any field of medicine. Emphasis has been placed on self-directed learning, integration of basic and clinical sciences, and more active forms of learning. Students' medical careers begin with the White Coat Ceremony, which defines the commitment and dedication they have made to their patients and themselves as they enter medical school. Students learn basic science knowledge during the first two years in lectures, problem-based learning sessions, small group discussions, laboratories, and clinical correlations. In mid-June of the second year, students sit for Step 1 of the USMLE. Students complete their first two years of medical school (MD-1, MD-2), and are required to earn passing grades in medical school coursework, pass USMLE Step 1, and be in good standing before entering the Ph.D. portion of the program.

Graduate School (PhD-1 through PhD-4)

PSP students are required to complete two to three 6-8 week lab research rotations (BMSP 7160) prior to matriculating to the PhD portion of the degree. The expectation of this course is to choose a Dissertation Advisor from one of the three rotations. The curriculum during the graduate years includes biomedical statistics, research conduct and ethics, student research presentations, weekly seminars, and electives focused on the students' research emphasis. Up to 24 credit hours of MD coursework is applied toward the PhD. Additional required milestones include the Preliminary Examination, Candidacy, Dissertation Prospectus, and Annual Dissertation Committee meetings. When the dissertation advisory committee is satisfied that the aims of the research project have been met and the dissertation has been defended successfully, the requirements for the Ph.D. will have been completed. PSP students prepare to re-enter medical school as they near completion of their dissertation. Students anticipating return to medical school notify the medical school in January and complete the clerkship selection process.

Medical School Years 3 & 4 (MD-3, MD-4)

After completion of the PhD, PSP students begin third year medical school clerkships in July or mid-August. The majority of clinical training is offered in the third and fourth years. Tulane has created a “combined” third and fourth year, whereby students have 20 months of training, of which 15 are required and 5 are elective. The requirements for the third and fourth year include: 8-week clerkships in internal medicine, surgery, pediatrics, obstetrics/gynecology, and psychiatry/neurology, a 6 week clerkship in family medicine, 2 weeks of radiology, emergency medicine, and outpatient surgery, and 5 one month electives, one month of ambulatory internal medicine, and a sub-internship. Students are also required to participate in a new interdisciplinary seminar series in which students choose from a variety of offerings. The entire family medicine clerkship is an ambulatory based experience with a community preceptor, most of whom practice in rural settings. The medicine and surgery clerkships are in-patient experiences, while the other clerkships offer a balance of inpatient and outpatient experience.

MD Requirements

Students complete their pre-clinical curriculum (first and second years) as a cohort and are registered by the School of Medicine Office of Admissions and Student Affairs. First- and second-year students will receive information through email listservs and dean's hours about how and when to choose their preclinical electives.

Third-year students complete their seven required clinical clerkships in a lock-step fashion. Third-year students will receive information through email listservs and dean's hours about how and when to find information about their third-year clerkships through eMedley's eCurriculum, and how to request a particular clinical clerkship path.

Fourth-year students select block dates for their required fourth-year rotations and electives through a lottery system. Fourth-year students will receive information through email listservs and dean's hours about how to use eMedley's eCurriculum's registration and scheduling resources

Year 1		**Credit Hours**
GANT 1008	Gross Anatomy	8
BIOC 1010	Biochemistry	7
GENE 1007	Genetics	1
HSTO 1001	Histology	5
PYSI 1002	Physiology	5
FIM1 1005	Foundations Med I	5
One pre-clinical elective in first or second year		1
	Credit Hours	**32**
Year 2		
BRBH 2006	Brain, Mind and Behavior	6
CLDG 2004	Clinical Diagnosis	3
FIM2 2005	Foundations Med II	2
IMMU 2001	Immunology	1
MICR 2000	Intro to Infectious Diseases	4
PATH 2002	Mechnms of Disease	14
PHAR 2003	Pharmacology	5
One pre-clinical elective in first or second year		1
	Credit Hours	**36**
Year 3		
Passing score on USMLE Step 1 [1]		
FAMY 3000	Family Medicine	6
SURG 3000	Surgery	8
PEDS 3000	Pediatrics	8
PYCH 3000	Psychiatry	4
NEUR 3000	Neurology	4
OBGY 3000	Obstetrics & Gynecology	8
MED 3000	Medicine	8
	Credit Hours	**46**
Year 4		
Passing scores on USMLE Step 2 Clinical Knowledge and Clinical Skills [2]		
MED 4409	Community Health [3]	4
EMER 4020	Emergency Medicine	2

ACLS training (complete before EMER4020) [4]		
RADS 3020	Radiology	2
Acting Internship (see various departments)		4
Clinical electives (see various departments) [5]		30
5 Interdisciplinary Seminars (offered through Office of Medical Education)		
	Credit Hours	**42**
	Total Credit Hours	**156**

1 Students must record a passing USMLE Step 1 score by October of their third year or they will be placed on leave of absence. See the Tulane School of Medicine handbook and policies for more information.

2 Students must record passing USMLE Step 2 Clinical Knowledge (CK) and Clinical Skills (CS) scores to graduate. Students are encouraged to take both Step 2 CK and Step 2 CS by December of their fourth year. See the Tulane School of Medicine handbook and policies for more information.

3 Students in Tulane's MD/MPH combined program and students who matriculated with or before the Class of 2015 are exempt from the MED4409 requirement but must complete 34 weeks' worth of electives.

4 ACLS training is provided through Tulane University's SIM Center. Students should consult the SIM Center for available training days/times.

5 Students in Class of 2021 are limited to a maximum of 1 online elective in their T3 year, and are limited to a maximum of 4 online electives in their T4 year: this limit should assist students with the busy interview season, but will also help students focus primarily on face-to-face, clinical elective opportunities. Students graduating after 2021 are advised that the Curriculum Committee may further reduce the maximum number of online electives that T4s may complete.

PhD Requirements

PSP students may transfer up to 24 credits of MD coursework to apply towards the PhD degree. The remaining 24 credits is achieved within the first year of the PhD, and consists of didactic courses, independent study, BMS Workshop and Seminar, and optional electives and special topics. Students are required to complete two to three 6-8 week lab research rotations (BMSP 7160) prior to matriculating to the PhD portion of the degree. The expectation of this course is to choose a Dissertation Advisor from one of the three rotations. With the Dissertation Advisor's recommendation, students may choose to take additional electives in the second year.

Summer Session		**Credit Hours**
Summer prior to entering MD-1		
BMSP 7160	Research Topics and Rotations	3
Summer prior to entering MD-2		
BMSP 7160	Research Topics and Rotations	3
Summer prior to entering PhD-1		
BMSP 7160 or BMSP 9990	Research Topics and Rotations or Dissertation Research	
*optional 3rd rotation if Mentor has not been selected		
	Credit Hours	**6**
	Total Credit Hours	**6**

Year 1

Fall		**Credit Hours**
BMSP 7100	Biomed Sciences Workshop	1
BMSP 7140	Biomedical Sci Seminar	1
BMSP 7990	Independent Study	3 - 6
BMSP 7500	Special Topics Must request BMS office to register	1 - 6
INTD 6010	Responsible Conduct of Research	0
Elective Elective courses should be chosen in consultation with the Dissertation Advisor. Advisor may suggest that no elective is needed.		0 - 3
*must register for a minimum of 9 credit hours		
	Credit Hours	**6-17**
Spring		
GBCH 7250	Biomedical Statistics and Data Analysis	2
BMSP 7110	Workshop	1
BMSP 7150	Seminar	1

BMSP 7990	Independent Study Must request BMS office to register	3 - 6
BMSP 7500	Special Topics Must request BMS office to register	1 - 6
Elective Elective courses should be chosen in consultation with the Dissertation Advisor. Advisor may suggest that no elective is needed.		0 - 3
*must register for a minimum of 9 credit hours		
	Credit Hours	**8-19**
Summer Session		
BMSP 9990	Dissertation Research	0
	Credit Hours	**0**
Year 2		
Fall		
PhD-2 Year and Beyond		
BMSP 9990	Dissertation Research	0
	Credit Hours	**0**
Spring		
BMSP 9990	Dissertation Research	0
	Credit Hours	**0**
Summer Session		
BMSP 9990	Dissertation Research	0
	Credit Hours	**0**
	Total Credit Hours	**14-36**

Once coursework is completed, students complete required milestones while performing research under the supervision of the Dissertation Advisor: selection of the dissertation advisory committee, passing the preliminary examination, admittance to candidacy, and the dissertation prospectus. Students must demonstrate the ability to carry out independent study and research in a chosen field, and successfully write and defend the dissertation.

Program String & Field of Study: MDPHD_GR, BMSP; MDMED_PR, MED

Dual Degree Code Validation: MD-PHD

Contact

For more information, contact the School of Medicine (https://medicine.tulane.edu/admissions/contact-us/).