

JOINT ACADEMIC PROGRAMS

Students in the M.D. program at the School of Medicine who are accepted into another Yale degree program will be considered to be participating in a “joint-degree program” and will receive the benefit of sharing tuition between the medical school and the other program’s school so that each program gives up a half-year of tuition. For example, a student accepted to the M.D.-J.D. Program will pay three and one-half years’ tuition to the School of Medicine and two and one-half years’ tuition to the Law School, completing seven years of school in six. This arrangement holds for Yale schools only. A student wishing to create such an arrangement at a school outside of Yale must receive permission from the associate dean for student affairs at the School of Medicine and, of course, must have the consent of the other school.

School of Medicine students enrolled in a joint-degree program or in a program to obtain a degree at another school (other than an M.D.-Ph.D. student in the MSTP program) must complete three years in the School of Medicine and take Step 1 and Step 2 CK of the USMLE by June 30th of the year that they start the joint/dual degree.

M.D.-PH.D. PROGRAM

A limited number of highly qualified students will be admitted into the M.D.-Ph.D. Program each year. Students accepted into this program have an excellent academic record, prior research experiences of a high caliber, and a strong motivation toward careers that will significantly impact the health of individuals and populations.

The goal of the M.D.-Ph.D. Program at Yale School of Medicine is to train excellent physician-scientists. Integrated medical and graduate research training equips students with technical, operational, and professional skills to carry out clinically relevant research. M.D.-Ph.D. Program graduates are expected to develop impactful research programs, informed by their understanding of human health and disease, and become leaders in their chosen fields.

The M.D.-Ph.D. Program, sponsored jointly by the School of Medicine and the Graduate School of Arts and Sciences, is intended for students who wish to obtain a research degree in an established Ph.D. program. Participating in the M.D.-Ph.D. Program are the Graduate School departments/programs of Anthropology; Applied Mathematics; Biomedical Engineering; Cell Biology; Cellular and Molecular Physiology; Computational Biology and Biomedical Informatics; Economics; Experimental Pathology; Genetics; History of Science and Medicine; Immunobiology; Interdepartmental Neuroscience Program; Microbiology; Molecular Biophysics and Biochemistry; Molecular, Cellular, and Developmental Biology; Pharmacology; Public Health (Biostatistics, Chronic Disease Epidemiology, Environmental Health Sciences, Epidemiology of Microbial Diseases, Health Policy and Management, and Social and Behavioral Sciences); Religious Studies; and Sociology. Students interested in taking the joint degree in another department may be able to do so, provided they can work out, in advance of acceptance, a program that is approved by the department concerned and the director of the M.D.-Ph.D. Program. Students who anticipate programs in the humanities and social sciences for their Ph.D. studies must be admitted to the programs concurrently with their admission to the M.D.-Ph.D. Program. Students are

not allowed to obtain their Ph.D. from an institution other than Yale University as part of the M.D.-Ph.D. Program.

Applications to the M.D.-Ph.D. Program are accepted from U.S. citizens or permanent residents and foreign nationals. All applicants selected for admission currently receive support from the program for stipend, tuition, and health fees. Substantial funding is provided by the Medical Scientist Training Program (MSTP) training grant provided by the National Institute of General Medical Sciences. Continuation in the program is contingent on satisfactory progress in both the School of Medicine and the Graduate School. Students spend an average of seven to eight years completing the requirements for the M.D.-Ph.D. Program.

Students matriculated in the Yale School of Medicine who are interested in joining the M.D.-Ph.D. Program should meet with the director or deputy director to discuss the internal application process. Internal applicants must apply by the fall of their second year of medical school. An important consideration for admission to the M.D.-Ph.D. Program is adequate research experience and identification of a supportive thesis adviser in the intended program of graduate study. Applications will be assessed on a case-by-case basis. It may be necessary to complete a summer (or the equivalent in time) of research in a lab at Yale for an application to be considered. Applications for admission are reviewed by the same committee that evaluates external applicants to the M.D.-Ph.D. Program.

Requirements of the M.D.-Ph.D. Program

M.D. and Ph.D. training is highly integrated throughout a student's time at Yale. M.D.-Ph.D. students begin their Ph.D. dissertation research after completing eighteen months of the pre-clinical School of Medicine curriculum and two twelve-week clinical rotations at the end of the second year of medical school. Students are expected to take their Step 1 board exams in the summer following the second year of medical school and affiliate with a graduate program by the beginning of the third year of the program. Only under unusual circumstances will students be allowed to complete more or less than six months of clerkships prior to beginning Ph.D. work; this requires prior approval of the director.

During the first and second years of medical school, the majority of M.D.-Ph.D. students complete graduate-level courses co-listed in the medical and graduate schools. In addition, there are M.D.-Ph.D.-specific courses that complement the core medical school curriculum, and course credit can be applied toward the requirements of the student's chosen Ph.D. program. Lab rotations (up to two approximately five-week rotations) in the summer between the first and second years allow students to explore potential thesis mentors and research projects. Students request affiliation with a particular department in the Graduate School by the beginning of their third year of study in the program. Any exceptions must be approved by the director of the M.D.-Ph.D. Program and the director of graduate studies (DGS) of the proposed Ph.D. department.

Students admitted to the joint-degree program must satisfy the Graduate School Honors requirement and complete all predissertation requirements within four terms of affiliation with the Ph.D. department. To be admitted to candidacy, students in the M.D.-Ph.D. Program must fulfill the Ph.D. program course requirements, teaching

requirements if applicable, a departmental qualifying examination, and the submission of an approved prospectus. An average of three to four years is spent completing the Ph.D. requirements.

To develop skills in our trainees that are associated with success in a broad range of physician-scientist research careers through experiential learning, the Certificate in Leadership and Research Management for Physician-Scientists was developed to provide formal training in the skills necessary for effective leadership and management of research and clinical teams. Workshops are organized into eight modules taken by students during their M.D. and Ph.D. training periods; Modules 1–4 (Mentoring, Proposal Development, Teaching, Inclusive Leadership) are required of all M.D.-Ph.D. students. Students are also required to complete at least one of four optional modules (Communication, Leadership and Teamwork, Self-Management, Nuts and Bolts of Research Management) during the course of their training.

After the student's thesis defense, the student returns to the medical wards to complete six months of integrated clinical clerkships and remaining clinical course work, including mandatory and/or elective subinternships, clinical electives, and the M.D. Capstone Course. Students must also pass Step 2 CK and C-OSCE exams by December 31 of the academic year in which they plan to graduate from the joint-degree program.

The Ph.D. dissertation will be accepted as the thesis requirement for the School of Medicine, providing the Ph.D. degree is received before or at the same time as the M.D. degree. If the M.D. degree is to be awarded before the Ph.D., an approved thesis must be submitted to the Office of Student Research at the School of Medicine by March 15 in order to meet the School of Medicine thesis requirement for graduation. Students will be eligible for the M.D. and Ph.D. degrees, provided the degree requirements for both the School of Medicine and the Graduate School have been fulfilled.

M.D.-M.H.S. PROGRAM

Yale School of Medicine has established a joint-degree program, the M.D.-Master of Health Science (M.D.-M.H.S.), for students who devote a year of extended study to mentored research.

The M.H.S. degree is completed during a year of extended study devoted to full-time research and supported by a one-year medical student research fellowship at Yale.

The mentored research project in the year of extended study is the centerpiece of the M.D.-M.H.S. degree program. In addition, the following requirements apply:

1. The project mentor and a three-person thesis committee must be approved by the Office of Student Research (OSR) and the M.D.-Master of Health Science Advisory Committee.
2. Additional course work is required. Please refer to the M.D.-M.H.S. website (<https://medicine.yale.edu/md-program/research/mhs>) as course requirements may change.
3. Participation in monthly research-in-progress seminars, journal clubs, Leadership in Biomedicine Lecture Series and dinners, and other announced activities throughout the master's research year is required. Further information is available

in the Office of Student Research or at <https://medicine.yale.edu/education/md-program/mhs>.

M.D.-M.P.H. PROGRAM

Students enrolled for the M.D. degree at the School of Medicine may apply to the Yale School of Public Health for admission to a combined program leading to the degrees of Doctor of Medicine and Master of Public Health. This program (Advanced Professional Program) is designed for students with special interest in aspects of medicine dealing with biostatistics, epidemiology of acute or chronic disease, organization and management of health services, or aspects of preventive medicine and public health.

Normally the combined program requires five years of study. One thesis satisfies both degree requirements provided it is approved and carried out under the supervision of a faculty member of the School of Public Health and is in an appropriate subject area.

Applications for the M.P.H. portion of this combined degree program must be submitted through www.sophas.org. The SOPHAS application opens in the fall of each year, and medical students are encouraged to apply during their third year of study. The M.P.H. program is on rolling admissions, and the final application deadline is December 15. Medical students may contact the YSPH director of admissions at ysph.admissions@yale.edu or the director of the AP M.P.H. Program, Dr. Mayur Desai, for more detailed information regarding the curriculum and areas of study.

M.D.-M.DIV. AND M.D.-M.A.R. PROGRAMS

Students who have been admitted to the Yale School of Medicine and are enrolled for the M.D. degree may apply to the Divinity School for admission to a combined program leading to the award of the degrees of Doctor of Medicine and either Master of Divinity (M.Div.) or Master of Arts in Religion (M.A.R.). Students who apply to either joint degree program are expected to do so at the same time that they apply to the School of Medicine or by the end of their second year at the School of Medicine in order to qualify for the special tuition arrangement.

Students enrolled in the M.D.-M.Div. Program pay three and one-half years' tuition to the School of Medicine and two and one-half years' tuition to the Divinity School. Students enrolled in the M.D.-M.A.R. Program pay three and one-half years' tuition to the School of Medicine and one and one-half years' tuition to the Divinity School.

The joint programs are tailored to the individual interests and needs of students seeking professional and academic study in theology and religion, including areas such as the understanding of the self, society, and work; bioethics; international health and missions; relating spirituality and healing to hospice or similar patient-care facilities; a biblical understanding of the person; and many forms of lay ministry or service (secondary teaching, college, or hospital chaplaincy, non-profit management, religion writing, etc.)

Six years are required for the combined M.D.-M.Div. Program. Five years are required for the combined M.D.-M.A.R. Program.

M.D.-J.D. PROGRAM

The Yale School of Medicine has a formal relationship with the Law School to allow students to seek degrees from both schools. This can be done in six years instead of

seven, as would be the case if these disciplines were studied separately. Students pay three and one-half years' tuition to the School of Medicine and two and one-half years' tuition to the Law School. Students interested in this program must confer early with the appropriate deans at each school to plan curriculum and find out if they qualify for the special tuition arrangement. Students at the Law School must petition for approval of a joint-degree program, and they may only petition after they have matriculated in Law School and completed their first term.

Students who apply to the joint M.D.-J.D. Program are expected to do so at the same time that they apply to the School of Medicine or by the end of their second year at the School of Medicine in order to qualify for the special tuition arrangement. Students must be found acceptable by both admissions committees. It is suggested that the student state on each application that the student is applying to both schools in order to pursue the combined degree program.

M.D.-M.B.A. PROGRAM

The purpose of the joint-degree program in medicine and management is to develop clinician-managers capable of pursuing careers that balance delivery of patient care with sound management in a changing health care environment. The joint-degree program normally requires five years of study and simultaneous award of the degrees of Doctor of Medicine and Master of Business Administration at the conclusion of the five-year period. A joint-degree student pays three and one-half years' tuition to the School of Medicine and one and one-half years' tuition to the School of Management, in a pattern determined in advance by the two schools. Students interested in this program must discuss their intentions with the associate deans of student affairs at both schools and with Howard P. Forman, M.D., M.B.A., director of this joint-degree program.

M.M.Sc.-M.P.H. JOINT-DEGREE PROGRAM

The M.M.Sc.-M.P.H. joint-degree program at Yale School of Medicine affords individuals interested in pursuing clinical and public health training a unique opportunity to complete both degree programs in thirty-nine months. The goal of this program is to expose students to the core competencies needed for shaping both local and global health systems as physician assistants and policy makers. Students must choose the area of academic concentration for the public health portion of their training from among the following: Epidemiology of Microbial Diseases, Chronic Disease Epidemiology, Social and Behavioral Sciences, or Health Policy.

Applicants must apply for admission and be accepted to both the Physician Associate Program and the Yale School of Public Health during concurrent admissions cycles. Although the deadline for application to the School of Public Health is December 15, individuals interested in the joint-degree program should apply to the PA Program and the School of Public Health as early as possible. For individuals granted an interview with the PA Program, the School of Public Health will expedite the review of the application.

Tuition and fees are billed to the student by the corresponding school during matriculation. Satisfactory academic progress is required for continued matriculation in both schools. The Master of Medical Science (M.M.Sc.) and Master of Public Health (M.P.H.) degrees are conferred upon completion of both programs.

TUITION ARRANGEMENTS FOR JOINT-DEGREE STUDENTS

The following tuition arrangements for joint-degree programs apply only if the student is enrolled at Yale University for both degrees. It is strongly suggested that students interested in any joint program make an appointment to speak with the registrar at each school to discuss the tuition payment schedule.

Students who spend five years in the School of Medicine in order to receive an M.D.-M.P.H. joint degree pay four years of full tuition to the School of Medicine and pay full tuition to the School of Public Health during the year in which they are enrolled in YSPH.

M.D.-Ph.D. students pay three and one-half years' tuition to the School of Medicine and two and one-half years' tuition to the Graduate School of Arts and Sciences. Any students who are in the program after six years will pay a minimal registration fee to the school they are attending.

Students who apply to one of the joint M.D.-J.D., M.D.-M.B.A., M.D.-M.Div., or M.D.-M.A.R. programs at Yale are expected to do so at the same time that they apply to the School of Medicine or by the end of their second year at the School of Medicine in order to qualify for the special tuition arrangements. Students in the M.D.-J.D. Program pay three and one-half years' tuition to the School of Medicine and two and one-half years' tuition to the Law School. Students enrolled in the M.D.-M.Div. Program pay three and one-half years' tuition to the School of Medicine and two and one-half years' tuition to the Divinity School. Students enrolled in the M.D.-M.A.R. Program pay three and one-half years' tuition to the School of Medicine and one and one-half years' tuition to the Divinity School. Students in the M.D.-M.B.A. Program pay three and one-half years' tuition to the School of Medicine and one and one-half years' tuition to the School of Management.