

SCHOOL OF MEDICINE

Foreword

Medical and biomedical education is a complex mixture of graduate and professional education. Students are expected to master basic principles and theories as well as to obtain sufficient knowledge and experience to practice in their fields. The education must convey the continually expanding body of medical and biomedical science and prepare students for working during a time of rapid change in technology and societal needs.

To meet these educational goals in the program leading to the M.D. degree, schools of medicine must be at once conservative and creative. They may often seem overly conservative, but this can be attributed to the physician's painfully acquired distrust of panaceas. There is a generally accepted need to preserve certain fundamental principles—the axiom, for example, that the rational practice of medicine rests on a firm understanding of the basic medical sciences. Yet the great advances in medicine, the need to reasonably limit the number of years of formal education, the increasing number and complexity of special fields, and the diversity of interests and talents among students all demand continual examination of our educational aims and process.

Old traditions and new methods are characteristics of the Johns Hopkins University School of Medicine, where medical student education to a large degree was founded in response to the highly variable standards of medical education at the time. Hopkins was the first medical school in the United States to require a college degree for admission to the M.D. program, quite a radical idea when the first class entered over one hundred years ago. A college degree is still required, and current admission policies encourage a broad undergraduate education and permit successful applicants to select from a number of options prior to matriculation. The relative flexibility of the original curriculum foreshadowed the even greater number of choices available today. The wide variety of elective courses in the current medical student curriculum allows students to extend their knowledge in special fields of interest and to schedule elective and required clinical courses in a flexible manner.

In addition to the four-year M.D. program, the School of Medicine provides a number of graduate programs in biomedical sciences and related fields that lead to a Ph.D. or Master's degree. Also, selected students are given the opportunity to work simultaneously towards both the M.D. and the Ph.D. degrees.

The diversity of these educational options is detailed in this catalogue.

Mission Statement

The mission of the Johns Hopkins School of Medicine is to educate medical students, graduate students, and postdoctoral fellows in accordance with the highest professional standards; to prepare clinicians to practice patient-centered medicine of the highest standard; and to identify and answer fundamental questions in the mechanisms, prevention, and treatment of disease in health care delivery and in the basic sciences.

Medical Education Program Objectives

The aim of the pre-doctoral curriculum of the School of Medicine is to produce leaders in Medicine who will take the foundation of a broad education in Medicine to improve health through patient care, research, and education.

As a measure of their competence, every medical student who graduates from the Johns Hopkins University School of Medicine will:

The Science and Practice of Medicine

- Apply scientific principles and a multidisciplinary body of scientific knowledge to the diagnosis, management, and prevention of clinical problems.
- Understand the variation in the expression of health and disease through critical evaluation of biomedical research.

Clinical Competence

- Obtain a sufficient level of medical knowledge to understand the basic facts, concepts, and principles essential to competent medical practice.
- Exhibit the highest level of effective and efficient performance in data gathering, organization, interpretation, and clinical decision making in the prevention, diagnosis, and management of disease.

The Social Context of Medicine

- Understand and respond to factors that influence the social, behavioral, and economical factors in health, disease, and medical care.

Communication

- Demonstrate effective and compassionate interpersonal communication skill toward patients and families necessary to form and sustain effective medical care.
- Present information and ideas in an organized and clear manner to educate or inform patients, families, colleagues, and community.

Professionalism

- Display the personal attributes of compassion, honesty and integrity in relationship with patients, families, and the medical community.
- Adhere to the highest ethical standards of judgment and conduct as it applies to the health care milieu.
- Demonstrate a critical self-appraisal in his/her knowledge and practice of medicine, as well as received and give constructive appraisal to/from patients, families, colleagues, and other healthcare professionals.

Lifelong Learning

- Understand the limits of personal knowledge and experience and will demonstrate the intellectual curiosity to actively pursue the acquisition of new knowledge and skills necessary to refine and improve his/her medical practice or to contribute to the scientific body of medical knowledge.

Medical Student Promotions

The record of each medical student will be reviewed by the appropriate Committee on Student Promotion at scheduled intervals and action will be taken on each student's status. In addition to maintaining good academic standing, medical students are expected to adhere to the accepted standards of professional behavior in their contacts with fellow students, faculty, patients, staff, and others. A student must satisfactorily complete the work of an academic year in all regards and be in good standing before advancement to the next year.

During years one and two, medical students must pass every course in order to be promoted. In either the first or second year, dismissal is

automatic if a student receives two failing grades, one failing and one unsatisfactory grade, or unexcused incompletes in two or more courses.

A medical student may repeat only one year of the first two years of the curriculum. During the repeat year dismissal is automatic if the student receives one failing grade or two unsatisfactory grades.

During the clinical years, a failure in a required course/clerkship will be referred immediately to Promotions Committee for discussion and presentation of a remediation plan, unless the student's overall performance requires consideration of dismissal. The student will be permitted to complete any subsequent required course/clerkship he/she has begun, but no additional required clerkships can be taken until the failure is remediated. Unsatisfactory performance in two courses/clerkships or failure in a subsequent course will result in dismissal from school at the discretion of the Committee on Student Promotion.

The Committee on Student Promotion may make specific recommendations regarding remediation of grades in any year.

Any student facing a potential adverse decision by the Committee on Student Promotion will be invited to address the Committee along with a School of Medicine faculty advocate of his/her choosing. A family member who is a School of Medicine faculty member may not serve as a student's faculty advisor. The student must put forth an explanation for the deficient performance, any extenuating circumstances, and any other information relevant to the student's fitness to continue the academic program.

A student who is dismissed or subject to another adverse decision affecting their status in the educational program may appeal to the Dean of the School of Medicine. The Dean's review will be based upon procedural grounds alone to guarantee that due process was afforded the student and that published policies were followed appropriately.

A student who has been dismissed may have the right to petition the Committee on Student Promotion for readmission to the program if there is additional information that might demonstrate the student's ability to successfully meet the academic and professional expectations of the school.

In accordance with the high standard of ethical conduct required of a physician, students are expected to refrain from acts of dishonesty which impair the academic integrity of the University. Students whose behavior appears to be unbecoming a physician will be reviewed by an ad hoc committee of the Advisory Board of the Medical Faculty, and such other persons as may be deemed appropriate. The ad hoc committee will be appointed by the Dean, or, in the Dean's absence, the Vice Dean for Education. This committee will decide on the student's status within the school. Students reviewed under such circumstances will have the opportunity to meet with the ad hoc committee in person prior to a decision. A student whose status is affected by a decision of the ad hoc committee will be afforded an opportunity to appeal to the Dean and, thereafter, to the Provost of the University. A complete description of procedures to be followed in disciplinary matters is located in this catalog in the section titled "Instruction Leading to the M.D. Degree." It is also available in the Student Affairs Office.

At the end of the Fourth Year the candidate's entire record, including both required and elective work, will be reviewed by the Committee on Student Promotion. Those who have satisfactory records and who are judged by the Committee to have demonstrated evidence of personal fitness for a career in medicine will be recommended to the Advisory Board of the Medical Faculty for the degree of Doctor of Medicine. Students must

have resolved all outstanding charges of misconduct and violations of academic ethics to be eligible for graduation.

Special Students/Visiting Students

Under special circumstances a limited number of properly qualified persons may be admitted as special students to courses offered by the School of Medicine. Special students will not ordinarily be accepted for enrollment in the required courses leading to the M.D. degree. Exceptions to this policy require the approval of the Vice Dean for Education. Credit will not be given for such work toward the M.D. degree in this school.

Students enrolled in other medical schools who desire clinical clerkships in the School of Medicine are advised that the School reserves the right to strictly evaluate the pre-clinical and clinical education provided by the applicant's own school. Moreover, since clerkship opportunities are necessarily limited, the School must give first consideration to placement of its own students. As a general rule, clerkships are limited to students in LCME-approved schools. Visiting students are also accepted for research opportunities. Enrollment of visiting students is usually limited to one four week period per academic year.

Information on application, fees, and health insurance requirements may be obtained from the Office of the Registrar.

Enrollment

The School of Medicine enrolls full time students for the M.D., Ph.D., and Masters' degrees. Part-time students are not accepted for the M.D. degree. Under special circumstances part-time students may be accepted for graduate study. Tuition is assessed in relation to period of enrollment as specified in the Tuition and Fees section of this circular.

Students may interrupt their course of study to enroll in a combined degree program. Leave of absence status may be requested if a student wishes to temporarily withdraw from the course of study.

Advanced studies program status is a category of full-time enrollment that recognizes the student who interrupts the usual sequence of study to do an additional year (or years) of research or clinical work at Johns Hopkins or another approved site. Students on Advanced studies program status are assessed a minimal registration fee. The Associate Dean for Medical Student Affairs must approve all requests for leave of absence and advanced studies program status.

Interdivisional Studies

Regularly matriculated students throughout the University are eligible to register for credit courses offered by the basic science departments and selected courses in clinical departments providing prerequisites are met and space is available. Admission to the required courses of the medical curriculum require approval of the course director and the Associate Dean/Registrar.

A tutorial program designed for junior and senior undergraduates offers over 100 tutorials in clinical and basic science departments. Divisional registrars can provide additional information.

Johns Hopkins Bloomberg School of Public Health

Courses in the Johns Hopkins Bloomberg School of Public Health are open to students of the School of Medicine without payment of additional fees if consent is obtained from the course instructor and

the administrative officers of the School of Medicine. Interdivisional registration forms must be used to enroll in Bloomberg School courses.

Medical students may elect to pursue the Master of Public Health (MPH) program in the Bloomberg School in conjunction with the medical curriculum. The program will consist of eleven months of required and elective courses in the Bloomberg School. This is exactly the same program followed by other individuals pursuing the MPH degree, as described in the catalog of that School. The specific elective course program will vary according to the special interests of the individual student.

Medical students integrate this special program into their medical curriculum by taking a year's leave of absence on completion of the second or third year. During that year the student is enrolled full-time in the MPH program in the Bloomberg School. Upon completion of the MPH degree program, the student will return to the School of Medicine. The MPH degree is awarded independently upon completion of all MPH degree requirements.

Tuition support for this program may be applied for through the Bloomberg School.

All applications are subject to the approval of the Admissions Committee of the MPH program in the Bloomberg School. School of Medicine approval for all programs must be obtained from the Associate Dean for Medical Student Affairs. Comparable study arrangements are possible also for medical students in other U.S. medical schools.

Opportunities are available for further training within the departments of the School and in numerous graduate degree programs. For those interested, information concerning these programs may be obtained from Admissions Services in the Bloomberg School.

Doctoral Programs

- Biochemistry, Cellular and Molecular Biology, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/biochemistry-cellular-molecular-biology-phd/>)
- Biological Chemistry, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/biological-chemistry-phd/>)
- Biomedical Engineering, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/biomedical-engineering-phd/>)
- Biophysics/Molecular Biophysics, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/biophysics-molecular-biophysics-phd/>)
- Cellular and Molecular Medicine, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/cellular-molecular-medicine-phd/>)
- Cellular and Molecular Physiology, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/physiology-phd/>)
- Cross-Disciplinary Program in Biomedical Sciences (<http://e-catalog.jhu.edu/medicine/graduate-programs/20cross-disciplinary-program-biomedical-sciences/>)
- Doctor of Medicine, MD (<http://e-catalog.jhu.edu/medicine/medical-students/md/>)
- Functional Anatomy and Evolution, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/functional-anatomy-evolution-phd/>)
- Health Sciences Informatics, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/health-sciences-informatics-phd/>)
- History of Medicine, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/history-science-medicine-technology-phd/>)

- Human Genetics and Molecular Biology, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/human-genetics-molecular-biology-phd/>)
- Immunology, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/immunology-phd/>)
- Neuroscience, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/neuroscience-phd/>)
- Pathobiology, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/pathobiology-phd/>)
- Pharmacology, PhD (<http://e-catalog.jhu.edu/medicine/graduate-programs/pharmacology-phd/>)

Masters Programs

- Anatomy Education, MS (<http://e-catalog.jhu.edu/medicine/graduate-programs/anatomy-education-ms/>)
- Applied Health Sciences Informatics, MS (<http://e-catalog.jhu.edu/medicine/graduate-programs/applied-health-sciences-informatics-ms/>)
- Health Sciences Informatics–Research, MS (<http://e-catalog.jhu.edu/medicine/graduate-programs/health-sciences-informatics-research-ms/>)
- History of Medicine, MA (On-site) (<http://e-catalog.jhu.edu/medicine/graduate-programs/history-medicine-ma-onsite/>)
- History of Medicine, MA (Online) (<http://e-catalog.jhu.edu/medicine/graduate-programs/history-medicine-ma/>)
- Medical and Biological Illustration, MA (<http://e-catalog.jhu.edu/medicine/graduate-programs/medical-biological-illustration-ma/>)

Post-Baccalaureate Certificate Programs

- Clinical Informatics, Post-Baccalaureate Certificate (<http://e-catalog.jhu.edu/medicine/graduate-programs/clinical-informatics-certificate/>)
- History of Medicine, Post-Baccalaureate Certificate (Online) (<http://e-catalog.jhu.edu/medicine/graduate-programs/history-medicine-certificate/>)

Combined Degree Programs

- MD-PhD, Combined Degree (<http://e-catalog.jhu.edu/medicine/medical-students/md-phd-combined-degree/>)