

Admission, Tuition and Financial Aid



Schedule of Application Procedures

June 1: Submission of applications to AMCAS (American College Application Service) in Washington, D.C., begins.

August 1: Deadline for Early Decision applications to be received by AMCAS.

September 1: Deadline for Early Decision applications, including all supplemental materials, to be received by the School of Medicine Office of Admissions.

November 1: Deadline for applications to be received by AMCAS. An application received by AMCAS after this date will not be forwarded to the School of Medicine unless the applicant has been approved for an extension by the Office of Admissions.

December 15: Deadline for supplementary application materials to be received by the Office of Admissions.

May 15: Applicants will have been notified of acceptance, offered a position on the alternate list, or no offer of acceptance. Selection of the class may continue to the start of classes.

Admission

The School of Medicine's admission policy promotes the UMMS mission by offering a high-quality, accessible medical education to those qualified residents of the state who will best serve the commonwealth's health care needs through medical practice, public service, education and research.

A committee composed of representative faculty members and medical students determines selection for admission. A number of factors are carefully considered in the committee's review of each applicant's qualifications and in the selection of a matriculating class that will represent a broad and diverse spectrum of individuals, backgrounds and interests. These factors include, but are not restricted to, the following:

- prior academic performance;
- content and breadth of scholastic preparation;
- standardized test performance (MCAT);
- service activities which indicate an ability to work with people in a helping role;
- a baccalaureate degree;
- certified legal residency in the Commonwealth of Massachusetts (application to the MD/PhD Program is not restricted to residents of Massachusetts). For more information

regarding the Determination of Massachusetts Residency Policy, please visit the Office of Admissions website: www.umassmed.edu/som/admissions/residency.aspx.

- diversity in a variety of areas, including, but not limited to, socio-economic background, educational background, work experience, nationality, languages spoken, ethnicity, race, gender, gender-identity and sexual orientation. Also considered in diversity are students from disadvantaged backgrounds and "resiliency" in terms of positive capacity to cope with stress and adversity.
- extracurricular accomplishments;
- oral communication and interpersonal skills as documented in letters of support and in the interview;
- written communication skills as determined by academic performance, standardized testing and materials submitted in the application package;
- achievement in scientific research and/or medically related service;
- evidence of motivation and preparedness for medicine; and
- attributes and values deemed necessary for physicians, including honesty, altruism, compassion, flexibility, maturity, intellectual curiosity, self-awareness, ability for self-directed learning and ability to work as a member of a team.

In consideration of the factors described above, the School of Medicine encourages students to pursue a pre-medical education of considerable breadth, including such coursework as English literature and composition, foreign languages, history, economics, ethics and the fine arts. In addition, all students must complete the coursework identified in Admission Requirements, demonstrating strong performance in the biological and physical sciences as a sound foundation for pursuing further study in the medical sciences.

No single program can be recommended as the “best” or “preferred” plan of study. Candidates are, therefore, encouraged to select educational programs that best reflect individual interests and aptitudes. Whenever possible, advanced study in a field of interest is encouraged, with particular emphasis on activities involving independent study.

Students who are granted advanced placement credits on their college transcripts for coursework taken in secondary school are advised to take additional college-level programs in these subject areas.

A Baccalaureate MD Pathway Program is now available for students enrolled in the undergraduate programs at the UMass Amherst, Boston, Dartmouth and Lowell campuses. For additional information about the program and its requirements, interested students should contact the Office of Admissions at the respective campuses and visit our website at www.umassmed.edu/som/admissions/index.aspx.

MA Residency Criteria

As the only public medical school in the Commonwealth of Massachusetts, it is the mission of this institution to serve the educational needs of Massachusetts residents. Applicants to the University of Massachusetts Medical School medical degree program MUST declare Massachusetts as their state of legal residence on their AMCAS applications. Only applications to the combined MD/PhD program are open to out-of-state residents.

- Applicants may not apply as a resident of more than one state. Applicants who do apply as a resident of Massachusetts will be required to complete the School of Medicine school specific Residency Validation form to complete their application.
- All applicants must be U.S. citizens or permanent residents.
- Massachusetts residency is routinely demonstrated by graduation from a Massachusetts high school. Applicants who have graduated from a Massachusetts high school are required to list the following on their AMCAS applications:
 - Massachusetts as their state of legal residence
 - Massachusetts as their permanent address (note: a post office box is not sufficient for consideration as a permanent address)

Applicants must also list the following on the school-specific Residency Validation secondary form:

- Massachusetts as their state of legal residence during high school (note: a post office box is not sufficient for consideration as a legal address.)

Those applicants who do not meet the specifics of the above criteria must “... show proof of continuous Massachusetts residency for a period of not less than five years immediately prior to enrollment.”

The following documentation may be considered by the School of Medicine Admissions Committee in determining Massachusetts residency:

- Foremost are five years of uninterrupted federal and state tax returns. Applicants must demonstrate they have listed Massachusetts as their legal residence on their federal and Massachusetts state tax returns. If the applicant’s parents claim the applicant as a dependent on their taxes, the parent(s) must list Massachusetts as their legal residence on their federal and Massachusetts state tax returns. Partial year tax returns will be considered. In lieu of five years of uninterrupted federal and state tax

returns, the following documents may be helpful in demonstrating Massachusetts residency:

- Residency of custodial parent(s) or legal guardian. A copy of a divorce decree may be required for documentation.
- Employment history in the state of Massachusetts (including W2 forms for as many years as possible).
- Military record listing Massachusetts as legal residence.
- Massachusetts driver’s license.
- Massachusetts voter registration.
- Marriage certificate listing Massachusetts as legal residence.
- Mortgage, rent, property tax or utility receipts in the applicant’s name listing Massachusetts as legal residence.
- Government bills or invoices in the applicant’s name listing Massachusetts as legal residence.

Producing only one or two sets of documents may not be sufficient in the absence of the tax returns. Please provide as many of the above listed documents as possible to assist the School of Medicine Admissions Committee in determining your Massachusetts residency. The committee reserves the right to consider each such case individually.

Additional Residency Requirements Information:

Attendance at a Massachusetts university or college does not, by itself, establish Massachusetts residency for the purposes of application to the School of Medicine. Applicants who are foreign nationals must possess a Resident Alien Registration Card (“Green Card”) at the time of application to be considered for School of Medicine admission, in addition to satisfying the criteria established for Massachusetts residency.

Massachusetts residents currently attending a college, university or other school in another state or in the military service may still qualify for classification as a Massachusetts resident applicant if they meet other established criteria (graduated from a Massachusetts high school while a resident of Massachusetts for example).

Submission of documentation does not guarantee residency criteria will have been met by the applicant. Decisions are made on a case-by-case basis, depending on the information provided. Applicants will be notified of the Admissions Committee decision.

MD/PhD Applicants

Only applications to the combined MD/PhD program are open to out-of-state residents.

MD/PhD applicants who graduated from a Massachusetts high school and wish to be considered as a Massachusetts resident must list Massachusetts as their legal residence on their AMCAS applications. Applicants must complete the residency validation form required from all applicants declaring Massachusetts as their legal residence. MD/PhD applicants who did not graduate from a Massachusetts high school and do not meet the required continuous five years of residency prior to enrollment may be considered as an out-of-state resident.

Appeal Process

Should the Admissions Committee determine the applicant does not meet Massachusetts residency requirements, the applicant may appeal the committee's decision.

The applicant should contact the Office of Admissions via email [admissions@umassmed.edu] expressing the intent to initiate the appeal process. Upon initiation of the appeals process, Admissions will notify the applicant of any additional information required (see Massachusetts Residency Criteria, above)

The Office of Admissions will respond in writing (email) acknowledging receipt of the appeal and with a list of requested information. The response will be sent to the candidate in writing (email) within 10 business days of receipt of the original appeal.

The applicant must submit to the Office of Admissions all requested documentation and any other information the applicant may view as applicable to the decision.

The appeal and requested documentation as well as the original submission materials related to Massachusetts residency will be reviewed by the UMMS School of Medicine Dean who will make the final decision regarding the applicant's residency status.

The candidate will be notified of the status of her/his appeal within 30 days of receipt of the candidate's submitted appeal documentation materials.

The applicant's full application fee will be refunded if the appeal is denied and he/she is not eligible for application to the School of Medicine.

Admission Requirements

Described below are the specific course requirements. Coursework in these areas must be completed within the last six years, and College Level Examination Program (CLEP) credit may not be used to satisfy these requirements. All required courses must be evaluated by traditional grading and not by a pass/fail system.

Joy and relief at Match Day 2013

Shouts of joy and relief filled the room as UMass Medical School's 123 graduating medical students learned where they would spend the next four to six years in residency training. Match Day, an annual rite of passage that happens all over the country on the same day at the same exact time, took on a new look in 2013 at UMMS, as students, family and friends gathered in the first-floor atrium of the Albert Sherman Center, the newly opened 512,000-square-foot education and research building that represents a new era of research, education and community life on campus.

Mai-Lan Rogoff, MD, who is retiring as associate dean for student affairs, distributed the envelopes for her 20th and final time, noting that once again, about half of students matched in primary care residencies. That number jumps to 70 percent when obstetrics & gynecology and emergency medicine residencies are included.

Half of graduating students will train in Massachusetts, with 22 staying at UMass Medical School to train with clinical partner UMass Memorial Health Care. Twenty-five students will go into internal medicine; 21 into pediatrics; 12 into family medicine; and six into medicine/pediatrics. An unusually large number of students matched into anesthesiology and dermatology—seven each.



Prerequisite courses must be taken at accredited colleges or universities in the United States or Canada. Applicants who have graduated from foreign colleges must have completed a minimum of one full year of study in an American or Canadian college/university, prior to submitting their application. The following courses are required:

- **Biology:** A one-year general biology or zoology course, with a laboratory component. Students wishing to pursue additional coursework in the biological sciences should consider genetics, embryology, cell biology or comparative anatomy.
- **Chemistry:** One year of inorganic and one year of organic chemistry, each with a lab.
- **Physics:** A one-year course in general physics, with a lab.
- **English:** At least one year of college-level English literature or composition. Applicants must demonstrate proficiency in the three domains of the English language, including reading, writing and oral communication.

The rapid expansion of the volume of medical literature and published research requires the ability to read rapidly with sound comprehension. Reading aptitude is essential, therefore, for learning as a student as well as for lifelong learning as a medical professional. Future physicians must also be able to write clearly, accurately and efficiently. In addition, the fundamental relationship between doctor and patient requires an ability to communicate verbally with empathy, clarity and respect. Finally, in professional relationships, the physician must communicate orally with other members of the health care team in a clear, concise, accurate and effective manner.

Additional Recommended Courses:

- **Biochemistry:** We are at an exciting time in medicine in which many diseases are becoming understood in terms of basic molecular processes. Biochemistry provides an important foundation for understanding how biological macromolecules perform the essential chemical processes required for life and health. A one- or two-semester course in biochemistry is recommended in order to provide the student with a solid basis for investigating how molecular malfunction can result in disease.
- **Calculus:** As the role of mathematics in the medical sciences continues to expand, a one-year introductory-level course in calculus is strongly advised.
- **Sociology/Psychology:** Applicants will find that the study of sociology and psychology provides important perspectives on human behavior, the interface between medicine and society, and an understanding of individuals as part of communities and populations. As our nation's population is becoming increasingly diverse, the cultural, demographic, linguistic, socioeconomic and ethnic backgrounds of patients are also changing. Courses that develop social awareness and an ability to constructively address societal variables will promote the attitudes and skills required to deliver culturally sensitive care to a diverse patient community.
- **Statistics:** There has been a rapid growth in clinical and epidemiological research fueled by the need to identify and promote cost-effective, evidenced-based medical care. Students will find that an understanding of statistical methods and terminology is essential to critically analyzing these studies and constructively applying the findings to the study and practice of medicine.
- **Computer Literacy:** As electronic technology expands, medical information will be universally transmitted and managed through computerized systems. In order to learn and use the technological advances in medical documentation and information systems, applicants must have a working

knowledge of desktop systems, common software packages (word processing, spreadsheets and databases) and educational informatics.

Prospective applicants are advised to consult the Association of American Medical Colleges (AAMC) Medical School Admission Requirements that can be purchased through the AAMC. This publication provides general recommendations concerning preparation for the study of medicine as well as specific information about the University of Massachusetts Medical School and other accredited American and Canadian medical schools.

Application Process

Applications for admission to School of Medicine must be made through the AMCAS. Applications are accepted between June 15 and November 1 of the year prior to admission. The deadline for completion of the application is December 15.

All applicants are required to take the Medical College Admissions Test (MCAT). Arrangements for taking the MCAT, requesting test reports, and questions concerning administration, scoring and processing of the test should be directed to the MCAT office.

Applicants are also required to complete a UMass School of Medicine supplementary application as well as a certification form documenting residency status in Massachusetts.

Admission Policy and Acceptance Procedure

The Committee on Admissions will review an application only when complete, with all supporting documents, as described below:

- The completed AMCAS application
- Supplemental application forms
- Technical Standards acknowledgement
- Off Campus Interview Option
- Transcripts of courses taken after completion of AMCAS application. Once the verified application has been processed by AMCAS and received by the Office of Admissions, any additional transcripts for subsequent coursework should be forwarded directly to the School of Medicine Office of Admissions for as long as the application remains active.

- Letters of Recommendation. Applicants should send all letters of recommendation directly to AMCAS who will forward the letters to the Office of Admissions electronically. AMCAS will accept letters from users of VirtualEvals, Interfolio, and via the U.S. Postal Service. If letters are being transmitted to the Admissions Committee by your undergraduate advising office, it is possible that office is using VirtualEvals. Once your letters are posted to VirtualEvals, they will be downloaded by AMCAS and made available to the Office of Admissions. If an applicant has a question about whether or not his or her advising office uses VirtualEvals, please contact the undergraduate advising office. The address to which letters should be mailed will appear on the AMCAS Letter Request Form. For more information on this process, please visit AMCAS Letters FAQ: https://www.aamc.org/students/applying/amcas/faqs/63226/faq_amcasletters.html

If available to the applicant, an official recommendation from his/her school's pre-medical advisory committee is required. In the event that such documentation is not provided by the applicant's school, two letters of reference must be provided from instructors in the prerequisite science courses. Letters of recommendation from commercial advisors are discouraged and are not substitutes for this requirement.

- MCAT. Applicants must have taken the MCAT within the three years prior to application.
- Non-refundable application fee.

Receipt of the AMCAS application will be acknowledged promptly by the School of Medicine Office of Admissions. It is the applicant's responsibility to ensure that all required documents are received. It is recommended that application materials be submitted as early as possible.

Once complete, each application is reviewed by the Committee on Admissions and a decision is made regarding the offer of an interview. An interview is required for acceptance, and interviews are conducted in Worcester at the invitation of the committee.

Important Contact Information

University of Massachusetts Medical School

55 Lake Avenue North
Worcester, MA 01655-1111
Office of Admissions:
508-856-2323
email: admissions@umassmed.edu
Website: <http://www.umassmed.edu/som/admissions>

Office of Student Affairs

508-856-2286

Association of American Medical Colleges

2450 N Street NW
Washington, DC 20037-1126
(202) 828-0400
Fax: (202) 828-1125
Website: <https://www.aamc.org/>

American Medical College Application Service (AMCAS)

Association of American Medical Colleges
Section for Student Services
2501 M Street, NW, Lobby 26
Washington, DC 20037-1300
(202) 828-0600
Fax: (202) 828-1120
email: amcas@aamc.org
Website: <https://www.aamc.org/students/applying/amcas/>

Medical College Admission Test (MCAT)

MCAT Program Office
P.O. Box 4056
Iowa City, IA 52243-4056
(319) 337-1357
Website: <https://www.aamc.org/students/applying/mcat/>

National Board of Medical Examiners

3750 Market Street
Philadelphia, PA 19104-3190
(215) 590-9500
Fax: (215) 590-9555
Website: <http://www.nbme.org/>

United States Medical Licensing Examination

Office of the Secretariat
3750 Market Street
Philadelphia, PA 19104-3190
(215) 590-9600
Fax: (215) 590-9470
Website: <http://www.usmle.org/>

Educational Commission for Foreign Medical Graduates

3624 Market Street, 4th Floor
Philadelphia, PA 19104-2685
(215) 386-5900
Fax: (215) 387-9963
Website: <http://www.ecfm.org/>

Applicants who have graduated from an undergraduate program are advised to contact their pre-medical college advisor for assistance with their application. This service is available no matter the length of time since graduation. The National Association of Advisors for Health Professionals, Inc. has information on its website for those who, for whatever reason, do not have access to a pre-medical advisor.

National Association of Advisors for Health Professionals, Inc.

P.O. Box 1518
Champaign, IL 61824-1518
(217) 355-0063
Fax: (217) 355-1287

With the exception of the Early Decision Plan (see page 36), acceptances will be offered beginning in October and thereafter until the class is filled. Applicants selected for admission will be notified by email and a follow-up letter from the Committee on Admissions. Accepted applicants will be expected to either accept or reject this offer within two weeks. In exceptional circumstances, applicants may be granted an additional two weeks to respond to the committee's offer of acceptance. Applicants are offered a provisional acceptance and are subject to a criminal background check (CBC). If the CBC reveals some prior contact with the criminal justice system, the applicant will be offered a full opportunity to respond. Provisional acceptances may (or may not) be withdrawn pending the school's review of that history and the applicant's response. The School of Medicine's process for CBC review includes the option of an appeal, in the event that a conditional offer of acceptance is withdrawn.

Once the class has been filled, the remaining applicants will be notified. Thereafter, a list of alternates will be prepared.

In the event that an enrolled student withdraws prior to matriculation, a replacement will be selected from the list of alternates. Applicants who are offered a position on the alternate list must communicate to the Office of Admissions their desire to be included on the list.

UMMS requires completion of the Student Health Clearance form prior to matriculation. It is imperative that the form be finalized prior to the start of classes since clinical work begins early in the first term. Without completion of the forms documenting immunity to contagious diseases, students may be restricted from clinical experiences.

Accepted students are provided with the Blood-Borne Pathogen Summary and Statement of Acknowledgement. Students must read and understand the School of Medicine policy regarding students with a blood-borne pathogen infection and return the signed Statement of Acknowledgement. Students who may transmit blood-borne pathogens may be restricted from situations that place others at risk.

An applicant who initially accepts an offer of admission to the School of Medicine and later decides to withdraw will be expected to inform the Office of Admissions promptly in writing so that another candidate may be offered a position.

Early Decision Plan

A strong applicant who is interested in applying only to UMMS may wish to submit an Early Decision application. An applicant who does not receive an offer of acceptance under the Early Decision Plan will automatically be considered for possible acceptance at a later date with the general pool of candidates.

Early Decision applications must be received by AMCAS by August 1 of the year prior to matriculation. Applications, including supplementary materials and fees, must be complete in the Office of Admissions by September 1. Final decisions regarding acceptance for Early Decision will be made by October 1.

Evaluation of Applicants

The Committee on Admissions is composed of faculty members representing various disciplines from the basic and clinical sciences and two medical students. Committee members carefully review each application and all enclosed information provided by or on behalf of the applicant.

The University adheres strictly to all applicable state and federal regulations relating to non-discrimination and equal opportunity. The decision to grant an interview is determined by committee members and is guided by the qualification standards previously described as well as by the merits of the applicant in comparison to the rest of the candidate pool.

Due to the large number of applications submitted each year, it is not possible to interview all applicants. The Admissions Office will notify those applicants who are selected for an interview. The interview provides an opportunity for direct exchange of information between the applicant and the School of Medicine faculty and Committee on Admissions. It also offers the applicant an introductory exposure to the learning environment and educational philosophy of UMMS as well as direct contact with students who actively participate in the interview day program.

Deferral Policy

UMMS discourages granting of deferrals. However, requests for deferrals may be submitted directly to the Associate Dean for Admissions and will be considered on an individual basis.



Transfers and Advanced Standing

Only transfer students with advanced standing at an Liaison Committee on Medical Education (LCME) accredited medical school are accepted to fill the few vacancies resulting from the withdrawal of previously enrolled students. Students interested in the possibility of transferring to the School of Medicine should direct inquiries to the Office of Admissions. Information regarding current policy on transfers and, when appropriate, application forms and instructions for applying will be sent to all potential applicants. It should be noted that the same residency requirements must be met as for those students entering the first year.

Given the integrated model for our courses and curricular framework, requests for advanced standing will be considered on a case-by-case basis. Under the oversight of the Associate Dean for Undergraduate Medical Education, requests for advanced standing in a given course will be reviewed by the respective curriculum committee and subject to approval by the designated course co-leaders. Requests for advanced standing should be directed to the Associate Dean for Undergraduate Medical Education.

Technical Standards for Admission, Continuation and Graduation

Revised: July 9, 2009

Introduction

The mission of the University of Massachusetts School of Medicine is to graduate skilled and effective physicians. It is the responsibility of the faculty to select applicants from among residents of the commonwealth who are best qualified to complete the required training and most likely to become the best possible physicians. Applicants are selected for admission to the school based not only on their scholastic achievement and ability, but also on their intellectual, physical and emotional capacities to meet the requirements of the school's curriculum and of a successful career in medicine. The faculty of the University of Massachusetts School of Medicine recognizes that academic competency is essential for success in medical school. Such

things as intellectual curiosity, undergraduate grades and the MCAT examination help to demonstrate academic competency. The Admissions Committee is instructed to exercise its judgment on behalf of the faculty in selecting the entering class. The committee is asked to consider not only academic ability, but also character, integrity, extracurricular achievement, commitment to service, ability to contribute to the advancement of medical knowledge and biomedical research, the likelihood of providing primary care in the commonwealth, serving the health care needs of our underserved communities, and overall suitability for the medical profession based upon information in the application, letters of recommendation and personal interviews.

The Liaison Committee on Medical Education, which accredits the Medical School, requires that the curriculum provide a general professional education, enabling each student to pursue graduate training in a variety of disciplines. Also, one of the missions of University of Massachusetts School of Medicine is to graduate a significant number of generalist physicians. This requires the development of broad knowledge, skills and behaviors, enabling ongoing self-directed learning, further training and delivery of competent medical care. The faculty of the University of Massachusetts School of Medicine believes that such a broad based and patient oriented curriculum is best suited for future generalists, specialists and physician investigators. The basic sciences curriculum includes anatomy, biochemistry, histology, pathology, pharmacology and physiology and is designed to establish a core of knowledge necessary for clinical training. The clinical curriculum begins early in the first year and includes diverse experiences in primary care, family medicine and ambulatory patient care. The third and fourth year include in-depth experiences in primary care, family medicine, internal medicine, obstetrics and gynecology, pediatrics, psychiatry, surgery, diagnostic imaging, pathology, emergency medicine, geriatrics and rehabilitation medicine in ambulatory and inpatient settings. These experiences provide a broad basis for the practice of medicine, regardless of the future choice of specialty. Each student

is required by the faculty to successfully complete each required course and clinical rotation to graduate.

The following technical standards specify those attributes the faculty considers necessary for completing medical school training, enabling each graduate to subsequently enter residency and clinical practice. These standards describe the essential functions students must demonstrate in order to fulfill the requirements of a general medical education and, thus, are prerequisites for entrance, continuation, promotion, retention and graduation from medical school.

The University of Massachusetts School of Medicine will consider for admission any applicant who meets its residency requirement, academic criteria, and demonstrates the ability to perform or to learn to perform the skills listed in this document, with or without reasonable accommodations consistent with the Americans with Disabilities Act (ADA). Any applicant with questions about these technical requirements is advised to discuss the issue with the ADA Student Coordinator prior to the interview process.

Certain chronic or recurrent illnesses that interfere with patient care or safety are not compatible with medical practice or training. Any student who is a carrier of a blood-borne pathogen [including, but not limited to, hepatitis B virus, hepatitis C virus and human immunodeficiency virus (HIV)] will not be permitted to perform some invasive procedures. This will restrict the student's ability to perform fully in some clinical clerkships and to meet the requirements of some specialties; therefore, the student will possibly be prohibited from future training and practicing in those fields. Other conditions that may lead to a high likelihood of debilitating student illness should also be carefully considered before committing to a clinical career. Deficiencies in knowledge base, judgment, integrity, character, or professional attitude or demeanor, which may jeopardize patient care, may be grounds for immediate removal from the clinical situation, course/rotation failure and possible dismissal.

A student must possess aptitude, abilities and skills in five areas:

- observation
- communication
- sensory and motor coordination and function
- conceptualization, integration and quantitation
- behavioral and social skills, abilities and aptitude

These are described in detail below. Students must be able to independently perform the described functions.

1. Observation

Students must be able to observe demonstrations and conduct experiments in the basic sciences, including, but not limited to: anatomic dissection of preserved tissues and cadavers, physiologic and pharmacologic demonstrations in animals, microbiologic cultures, microscopic studies of microorganisms and animal and human tissues in normal and pathologic states. A student must be able to observe patients accurately at a reasonable distance and close at hand, noting nonverbal as well as verbal signals. Specific observational requirements include, but are not limited to, the following abilities: detecting and identifying significant changes in colors of fluids, skin, culture media and dipstick tests; perceiving with acuity and accurately discriminating findings on X-rays and other imaging tests; efficiently reading written and illustrated material; observing intracellular details through a microscope; observing demonstrations in the classroom, including projected slides, films, videos and overheads; observing and differentiating changes in body movement; observing anatomic structures; discriminating numbers and patterns associated with diagnostic instruments and tests, such as sphygmomanometers and electrocardiograms, and using instruments competently, such as the otoscope, ophthalmoscope, microscope and stethoscope.

2. Communication

Students must be able to relate effectively and sensitively with patients of all genders as well as all ages, races, life-styles, sexual orientations and cultural backgrounds, and be able to convey a sense of compassion and empathy. A student must be able to communicate clearly with and observe patients in order to elicit information; accurately describe changes in mood, activity and posture; and be able to perceive verbal as well as nonverbal communications. Communication includes not only speech but also reading and writing. Medical education presents exceptional challenges in the volume and breadth of required reading and the necessity to impart information to others. Students must be able to communicate quickly, effectively and efficiently in oral and written English with all members of the health care team. Specific requirements include, but are not limited to, the following abilities: communicating rapidly and clearly with the medical team on rounds; eliciting a thorough history from patients; and communicating complex findings in appropriate terms to patients and to various members of the health care team (fellow students, physicians, nurses, nurses' aides, therapists, social workers and others). Students must learn to recognize and promptly respond to emotional communications, such as sadness, worry, agitation and lack of comprehension of physician communication. Each student must be able to read and to record observations and plans legibly, efficiently and accurately in documents, such as the patient record and the electronic record. Students must be able to prepare and communicate concise but complete summaries of individual encounters, including hospitalizations. Students must be able to complete forms according to directions in a complete and timely fashion. Students must be computer literate and able to access patient records and medical information with facility.

3. Sensory and motor coordination or function

Students must be able and willing to perform with acuity, accuracy and facility a complete physical examination on any patient of all genders, utilizing palpation, auscultation, percussion and other diagnostic maneuvers. In general, this requires sufficient ability to observe with acuity and to process accurately visual, auditory, exteroceptive (smell, touch, pain and temperature) and proprioceptive (position, pressure, movement, stereognosis and vibratory) phenomena as well as the ability to manipulate with precision, at a fine level of movement, patients and medical instruments and equipment. Methods of surgical instruction include practice on living or preserved animal tissues. A student must be able and willing to provide general care and emergency treatment to any patient of all genders in a timely manner. Furthermore, a student must be able to respond promptly to medical emergencies within the hospital and must not hinder the ability of co-workers to provide prompt care. Examples of such emergency treatment reasonably required of physicians include arriving quickly when called and initiating cardiopulmonary resuscitation, administering intravenous medication, applying pressure to stop bleeding, opening obstructed airways, suturing wounds and performing basic obstetrical maneuvers. Cardiopulmonary resuscitation may require moving an adult patient, repeatedly and rapidly applying considerable chest pressure, delivering an adequate volume of artificial respiration and calling for help. A student must be able to learn to perform basic laboratory tests, e.g., urinalysis, completed blood count, and diagnostic and therapeutic procedures, e.g., phlebotomy, arterial blood gas drawings, lumbar puncture and arthrocentesis. Students must be able to measure angles and diameters of various body structures using tape measure and goniometer, measure blood pressure and pulse and interpret graphs describing biologic relationships. Clinical rotations in ambulatory care settings require the ability to transport oneself to a variety of ambulatory settings in a timely manner, and inpatient rounds require prolonged and rapid movement.

4. Intellectual-conceptual, integrative and quantitative abilities

These abilities include measurement, calculation, reasoning, analysis, judgment and synthesis. The student must also be able to recognize letters and numbers quickly and accurately. Clinical reasoning and problem solving are critical skills demanded of physicians requiring all of these intellectual abilities, and they must be performed quickly, especially in emergency situations. Moreover, the effective physician often must deal with several tasks or problems simultaneously ("multi-tasking"). Students must be able to identify significant findings from history, physical examination, and laboratory data, provide a reasoned explanation for likely diagnoses, construct a reasoned and cost-effective diagnostic plan, and prescribe medications and therapy, recalling and retaining information in an efficient and timely manner. Students must be able to identify and communicate the limits of their knowledge to others when appropriate. The ability to incorporate new information from peers, teachers and the medical literature in formulating diagnoses and plans is essential. Good judgment in patient assessment, diagnostic and therapeutic planning is essential.

5. Behavioral and social attributes

Empathy, integrity, honesty, concern for others, good interpersonal skills, interest and motivation are all personal qualities that are necessary for any physician. Students must be able, in all clinical and academic settings, to fully utilize their intellectual abilities, to exercise good judgment and to promptly complete all responsibilities attendant to the diagnosis and care of patients. They must be able and willing to develop mature, sensitive, professional and effective relationships with patients of all genders, ages, races, lifestyles, sexual orientations and cultural background, as well as with patients' families, with other health care providers and with all members of the learning and working community. At times this requires the ability to be aware of and appropriately react to one's own immediate emotional responses, e.g., students must maintain a professional demeanor and be able to function at a high level in the face of



personal fatigue, dissatisfied patients and their families and tired colleagues. Students must be able to develop professional relationships with patients and their families, providing comfort and reassurance when appropriate while protecting patient confidentiality. Students must be able to maintain professional conduct when interacting with patients and the families of patients suffering from catastrophic illness, trauma and death. Students must possess adequate endurance to tolerate physically taxing workloads and to function effectively under stress. All students must be able and willing to work on any day of the week and on any day of the year when called upon to serve in scheduled clinical activities or learning opportunities. All students are at times required to work for extended periods, occasionally with rotating and overnight shifts. Students must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Students are expected to accept appropriate suggestions and criticism and, when necessary, to respond by modifying their behavior.

Tuition and Fees

Full tuition for the 2012-13 academic year is \$8,352. Two-thirds tuition subject to the Learning Contract is \$5,568. Students enrolled for school courses for credit are assessed the full tuition for each semester of enrollment. The first semester after a student has completed eight full semesters of Medical School tuition payments, excluding prior semesters of compensation-based tuition waiver was received, the student's status will change to extended student program fee status. The student is not assessed tuition, but is assessed the extended student program fee on a per semester basis, plus all other student fees.

Students who register late and/or who are delinquent in the valid repayment of bills will be assessed a late registration fee and/or a late payment fee. Tuition and fees may be changed at any time without prior notice. For updated information about tuition, fees and related policies, please visit www.umassmed.edu/som/tuition

Learning Contract

The School of Medicine offers matriculated students, whether or not they apply for other types of financial aid, a Learning Contract. The Learning Contract is a financial instrument that defers two-thirds of tuition and functions in the manner of an 8 percent loan that can be repaid with either money

or certain legislated service. Interest will accrue at the rate of 8 percent beginning the latter of six months after ceasing enrollment at UMMS or the end of the first year of residency. There is a six-month grace period after completion of medical residency or fellowship or six months after graduating from the School of Medicine if one does not enter a residency. To pay with service, a graduate needs to work the equivalent of full time for 48 consecutive months in Massachusetts. The service payback must meet one of three criteria: a primary care practice anywhere in the commonwealth; any other practice in an underserved area, if one exists; or in community or public service of particular benefit to the commonwealth. Those seeking to pay with service must gain prior approval from the Learning Contract Advisory Group. Additional information about the Learning Contract can be found at <http://www.umassmed.edu/financialaid>

Refund Policy

Refunds are calculated when students do not register for the academic term for which they are charged, take an approved leave of absence or otherwise fail to complete the program on or after the first day of class of the period of enrollment for which charges are assessed.

Students who cease enrollment after 60 percent of the term has elapsed receive no refund and are not required to refund any federal aid received for the term. Students who cease enrollment before 60 percent of the term has elapsed receive a refund for the percentage of the term remaining after the last date of attendance. The percentage is calculated by dividing the number of calendar days elapsed between the beginning of the term and the date the individual ceases enrollment by the number of calendar days in the term. For example, a student who withdraws 57 percent of the way through the first term of enrollment receives a refund of 43 percent of tuition and fees (100 percent minus 57 percent). If a student received Title IV funds, this refund must be returned to the Title IV program. Additionally, according to federal rules, the student is also required to refund 43 percent of aid received as cash or from a credit balance. Failure to return unearned

Title IV aid may result in ineligibility for future federal aid.

Allocation of Refunds

A share of the refund will be returned to the financial aid programs that funded students. Refunds and recovered overpayments are allocated to the programs from which an individual received aid in the following order:

- Federal Unsubsidized Stafford Loan
- Federal Stafford Loan
- Federal Perkins Loan
- Other Federal Student Aid Programs
- Institutional Student Aid Programs
- State Student Aid Programs
- Private Student Aid Programs Student

Students must notify the Dean of the respective graduate school and the Registrar in writing of their intent to withdraw. Students who withdraw without notifying the Dean and Registrar of their status will be considered withdrawn as of the last recorded date of class attendance as documented by the University.

Upon request, the School Bursar will provide examples of the application of these policies. Any withdrawn student who believes that individual circumstances warrant exceptions from published policy may make a written appeal to:

Nancy E. Vasil
 Director of Financial Services
 University of Massachusetts
 Medical School
 55 Lake Avenue North
 Worcester, MA 01655

Note: This policy is subject to change at any time without prior notice if necessary to comply with federal law.

Financial Aid

Students and their families, i.e., parents, stepparents and spouses, share the major responsibility of financing undergraduate medical education. Because the majority of financial assistance available to medical students is loan aid, UMMS encourages only those students who are unable to fund their own education to apply for financial aid. Furthermore, UMMS encourages loan recipients to plan for repayment of their student loans before borrowing their first loan. Descriptions of all federal student financial aid programs are subject to legislative and regulatory changes without prior notice.

To be eligible for financial assistance, students must be accepted for admission or enrolled in good standing and making satisfactory academic progress. In addition, they must neither owe a repayment on a Federal Pell Grant, Federal Supplemental Educational Grant or State Student Incentive Grant, nor be in default on a Federal Perkins Loan (formerly National Direct Student Loan), Federal Stafford Loan Federally Insured Student Loan, Federal Supplemental Loan for Students, Federal PLUS or Federal ALAS loan received for study at any post-secondary institution. Furthermore, students must demonstrate either federal eligibility or financial need to be eligible for most, although not all, financial aid programs. Because financial aid is awarded annually, all financial aid recipients need to reapply each year.

The Financial Aid Office will process applications for students who apply for only Federal Unsubsidized Federal Stafford Loans as soon as they are complete. The Financial Aid Office can award its limited institutionally based funds only after the majority of applicants for institutional aid complete their applications. Each year an individual student's financial aid package is a mathematical function of the total institutionally based gift aid available and the need—after subtracting the calculated parental contribution, whether or not it is actually provided—of all students applying for institutionally based funds. Awards may vary by students' length of enrollment and vary annually depending on available funds.

It is the responsibility of students to read all directions and make certain that all required forms are received by the Financial Aid Office by published deadlines. Students who submit application materials after deadlines have passed may be ineligible for institutionally controlled funds. Information and application materials can be found at the Financial Aid Office's website at www.umassmed.edu/financialaid/.

Gift Aid

Students applying for institutional aid must complete the entire financial aid application, including questions about parental income and assets. Forms of gift aid include but are not limited to:

Alumni Association Scholarship

Each year, the UMMS Alumni Association grants several scholarships of either \$1,500 or \$2,500 to students with financial need.

Anonymous Scholarship Fund

In July 1971, an anonymous donor created an endowment fund at UMMS. When income from this endowment fund is sufficient, scholarships are granted to medical students with financial need.

Parking Violation Scholarship

The Parking Violation Scholarship Fund receives revenue from parking fines attributable to violations on the University campus. Gift aid from this fund is awarded to students with financial need at UMMS.

Alfred M. Rothschild Scholarship Fund

The family of Alfred M. Rothschild, MD, established an endowment fund in August 1984 for the purpose of student support. When sufficient income from the fund is available, gift aid is awarded to medical students with financial need.

Scholarships for Disadvantaged Health Professions Students (SDS)

SDS funds, which were first authorized in 1991-92, are allocated to the University from the federal Department of Health and Human Services. Scholarship recipients must be both disadvantaged and demonstrate financial need.

Walter N. Secord Endowment Fund

The Secord Endowment Fund was established in 1980 in memory of Walter N. Secord, MD. When sufficient income from the fund is available, gift aid is awarded to medical students in financial need.

Student Support Fee Scholarship

Each year a portion of the student support fee paid by students is made available for scholarships for students with documented need for institutional aid.

Tuition Waiver (Need-Based)

The Board of Trustees of the University of Massachusetts approves an annual dollar amount of need-based tuition waivers for medical students. Eligibility for tuition waivers is limited to students who complete institutional financial aid applications and who have documented need. Need-based tuition waivers do not reduce tuition deferred by the Learning Contract.

UMass Memorial Physicians Group Scholarship

Established in 1988 by the UMass Memorial Physicians Group, these scholarships are awarded annually to students with financial need based on the income available from the endowment.

Worcester District Medical Society Scholarships

UMMS does not administer this fund. These scholarships are awarded to medical students with financial need who are residents of Central Massachusetts. Other District Medical Societies across the commonwealth offer similar programs to students that are residents of towns within their district. Students are encouraged to contact these Societies directly for further information.

Loan Programs

Federal Perkins Loan (formerly National Direct Student Loan)

Federal Perkins Loan funds are allocated to the University from the federal government. The annual federal allocation is supplemented with institutional matching funds and collections from previous borrowers. Students who provide parental information on the FAFSA and CSS Profile, as

well as parental tax returns, are considered for Federal Perkins Loans. Eligible students must demonstrate federal eligibility and satisfactory academic progress. Depending on the availability of funds, professional students may borrow an annual maximum of \$6,000. The total outstanding balance on all undergraduate and graduate Federal Perkins Loans may not exceed \$40,000. Federal Perkins Loans carry 5 percent interest. Loans for borrowers with outstanding balances disbursed before July 1, 1987, have a six-month grace period; loans for first-time borrowers as of July 1, 1987, have a nine-month grace period.

Borrowers may receive deferments during periods of at least half-time student status, graduate fellowship, or rehabilitative study for the disabled, excluding a medical internship or residency program; for a maximum of three years during which the borrower seeks, but is unable to find, full-time employment; for a maximum of three years during which, according to federal regulations, repayment would present a financial hardship; or if the borrower is engaged in service eligible for partial cancellation of the loan.

Federal Direct Unsubsidized Stafford Loan

Federal Direct Unsubsidized Stafford Loans (formerly Guaranteed Student Loans or GSL) are federally insured educational loans made to students by the federal government. Eligible applicants must maintain satisfactory academic progress in a program of study leading to a degree, demonstrate eligibility as defined by federal regulations and file appropriate financial aid applications. In an academic year, an eligible student may borrow a maximum that is the least of \$47,167, the cost of education minus other financial aid. Stafford Loans, including both subsidized and unsubsidized, may not exceed \$224,000.

The interest rate as of July 1, 2006, is fixed at 6.8 percent per year. All loans are disbursed twice during the loan period, one-half at the beginning and one-half midway through the loan period. Interest accrues on the loan during periods of enrollment.

Two fees, a 3 percent origination fee and a 1 percent guarantee fee, are deducted from loan proceeds.

First-time borrowers after June 30, 1993, may receive deferments during periods of at least half-time student status, graduate fellowship or rehabilitative study for the disabled; for a maximum of three years during which the borrower seeks, but is unable to find, full-time employment; and for a maximum of three years during which, according to federal regulations, repayment would present a financial hardship. Borrowers with outstanding balances on Stafford Loans made before July 1, 1993, should check their promissory notes to see the additional deferments to which they are entitled.

Lenders must grant forbearance to any medical intern or resident who requests it. Forbearance is defined as the cessation of scheduled payments for a proscribed period of time. Interest continues to accrue, and may be capitalized, during periods of forbearance. The lender will require documentation of internship or residency.

Federal Graduate PLUS Loan

Graduate students may borrow up to the cost of attendance minus any other aid. The interest rate is fixed at 8.5 percent and interest accrues during periods of enrollment. Borrowers must pass a credit check to be eligible for these loans. There is no cumulative principal balance maximum on these loans. Two fees, a 3 percent origination fee and a 1 percent guarantee fee, may be deducted from loan proceeds. Some guarantee agencies or lenders may pay some or all of the fees for borrowers.

Loans for Disadvantaged Health Professions Students (LDS)

First authorized in 1991-92, LDS funds are allocated to the University from the federal government. The annual federal allocation is supplemented with institutional matching funds and collections from previous borrowers. Only medical students with financial need who complete the entire financial aid application and submit parental income tax returns and parental information on the FAFSA and CSS Profile may be considered for this program. LDS loans have a five percent simple interest rate and a

one-year grace period. No interest accrues on loans during in-school periods, grace periods and authorized periods of deferment. Deferments are granted for residency training and for service in the National Health Service Corps, military or Peace Corps.

Massachusetts Medical Society Loan

Every year the Massachusetts Medical Society makes loans that have interest rates that vary from 1 percent to 6 percent during the life of the loans available to third- and fourth-year students with financial need at UMMS. Although UMMS does not administer this loan fund, the Financial Aid Office awards MMS loans as if they were institutionally controlled funds. During academic year 2012-13, UMMS was authorized to make 60 loans at \$5,000 each.

Alternative Education Loan Programs

In addition to the major federal and institutional loan programs, several privately sponsored alternative loan programs may be used to meet need and/or replace calculated family contributions. Examples of these programs include the Sallie Mae Smart Loan, MEFA Alternative Loan and MEDCAP Alternative Loan. Common elements shared by these loan programs include variable interest rates that accrue from the date the loan is disbursed, insurance fees that are deducted from loan proceeds and the requirement that borrowers be credit-worthy. The maximum annual and cumulative loan, specific interest rate, provisions for deferment and frequency and compounding of accrued interest and other fees vary by program and may vary from year to year. Only participating lenders provide these loans; the lender and guarantor may change during the course of a borrower's enrollment in medical school.

Emergency Loan

Interest-free, short-term emergency loans are available to students who have unanticipated, bona fide financial emergencies; have not been delinquent on a previous emergency loan; and do not owe past-due tuition, fees or other charges to the school. Loans less than \$101 are due in 30 days; loans between \$101 and \$300 are due in 60 days; and loans between \$301 and \$500 are due in 90 days. The maximum loan is \$500. Applications are available in the Financial Aid Office. Failure to repay emergency loans on time leads to suspension of eligibility for future emergency loans and possible administrative withdrawal.