
Duke Master of Biomedical Sciences FAQs

GENERAL QUESTIONS Oct 2016 Update

What is the Duke Master of Biomedical Sciences (MBS) degree program?

The MBS is a 10.5 month professional degree awarded by the Duke University School of Medicine (SOM). It enhances the scientific and professional preparation of students aspiring to a career in the health professions or in a related field requiring a background in integrated biomedical sciences. This is accomplished by providing a combination of graduate level scientific coursework, immersive patient-centered service learning, advising, and professional skill development. Students who successfully complete the program of study earn a Master of Science in Biomedical Sciences degree from the School of Medicine.

What are the components of the MBS?

The academic program of study entails:

- Courses in the human biomedical sciences integrated with Emergency Medical Technician (EMT) training;
- Graduate level study incorporating emerging areas of emphasis in medical education;
- A skills-based professional development curriculum centered around communication, collaborative problem-solving, and teamwork; and
- Individualized electives.

The concurrent co-curriculum consists of:

- Customized advising, mentoring, and career exploration;
- Guided preparation of applications to medical or other health professions schools;
- An option for pre-matriculation advising; and
- Opportunities to develop relationships with students and faculty in a variety of health professions and related careers.

Program goals are modeled and reinforced through teaching methods shown to promote academic achievement, critical thinking, scientific inquiry, team skills, capacity for improvement, and cultural competence. These include team-based learning, co-mentored small group seminars, experiential learning, simulation, critical reflection, and narrative writing.

What are the degree requirements and length of study?

The degree requires a total of 38 credits; of these, thirteen courses comprise a required core curriculum of 34 credits. The remaining four credits are earned by completing one of two options for an individualized concentration: four credits of approved elective coursework or a mentored research/focused study project resulting in a written capstone paper.

Students are full-time; program completion requires a minimum of two consecutive semesters (Fall and Spring semesters) starting in early July and ending the following May. Students whose concentration includes a research project may elect to extend their program of study for an additional academic term, with permission of program leadership and student advisor.

The student time commitment is estimated to be, on average, 20-22 hours per week of “programmed” activity and 38-40 hours per week of preparation and study for a total effort for success in the program of approximately 60 - 70 hours per week.

The students’ program of study follows this sequence:

FALL SEMESTER

July – August

- Human Structure
- Medical Arts & Sciences I
- EMT Curriculum

Sept - Dec

- Cellular Sciences
- Medical Arts & Sciences I
- EMT Certification & EMT Clinicals I
- Discovery/Journal Club I
- Medical Statistics

SRING SEMESTER

Jan – May

- Systems Sciences
- Medical Arts & Sciences II
- EMT Clinicals II
- Discovery/Journal Club II
- Health Systems and Health
- Electives

Features of Duke’s MBS that distinguish it from other programs include:

- Gross anatomy with cadaveric dissection laboratory, integrated with other biological sciences and the EMT curriculum;
- EMT training, certification, and clinical experiences in the Duke Emergency Department and Duke Urgent Care Clinics;
- Courses designed specifically for and dedicated to MBS students;
- Located within School of Medicine on campus of academic medical center;
- Team-based learning and small group seminars;
- Program-based scholarships
- Extensive advising by a team of faculty and student services staff

Who is the target audience for this program?

This program targets students who have completed premedical/prehealth curricula, who wish additional time to explore potential health careers, be guided through an application process to health professions schools, and/or strengthen academic and professional credentials for admission to health professions schools or entry into the workforce, including:

- Aspirants to health careers, pre-med and others, who have not yet applied;
- Aspirants to health careers, premed and others who are “near misses”;
- Those interested in health related careers: early in career exploration and unsure of which direction;
- Those interested in health related careers: teaching, business, journalism, entrepreneurship, venture capital, regulatory, policy, emerging disciplines;

- Doctoral students seeking to enhance the breadth of their scientific knowledge and gain an immersive clinical experience to better understand how to connect their science to patients

What are the criteria for admission?

Applicants who are a good fit for the MBS will already be good candidates for admission to a health professions school, so a baccalaureate degree from an accredited institution and medical/health professional school prerequisites must have been completed prior to matriculation. Applicants must have earned a minimum undergraduate cumulative G.P.A. of 3.2; strength and relevance of post-baccalaureate work is considered on an individual basis.

What is the class size?

We began the program in 2015-16 with ~ 30 students; our class size in AY 2016-2017 is 42. We anticipate keeping our class size ~40 students for the foreseeable future.

What percentage of applicants to your program are admitted?

Of “viable applications” - those applicants who submitted complete applications and paid the application fee – during the first two years of the program, we offered admission to approximately 20%. The rate of offer acceptance has been high both years – approximately 75%.

What is the plan for advising the students?

Each student is assigned to a primary faculty adviser who will participate in the student’s onboarding activities and intake assessment process, guide the development of the student’s individual plan, and in partnership with the other advisers and learning specialist, provide academic guidance throughout the program, including approval of the student’s options for the elective component of the program. Students accepted into the MBS who plan to apply to medical or another health professions school will be offered a pre-MBS matriculation advising option to ensure that those students understand the application process and are on track to prepare for the various application deadlines during their program of study.

The advising team includes faculty from the medical, physician assistant, physical therapy, pharmacy, and nutrition sciences professions, and the graduate biomedical sciences as well as individuals with substantial experience in career services, health professions advising and student learning differences.

In addition, the MBS program strongly encourages its students to complete HLTHSCI 533 Intentional Planning for Health Professions Education. Through a series of workshops, this elective course provides students with a “deep dive” into the preparation of a competitive professional school application.

What are the benefits for those students who do not go on to medical/health professions schools?

Students learn the language of human medicine (e.g. anatomy and biological systems) as well as the context of clinical care (e.g. the providers’ perspective, health delivery systems). The vocabulary, perspectives and first-hand experiences will be useful in careers such as research, law, journalism, regulatory affairs, pharmaceuticals, medical writing, performance improvement, health professions teaching, etc. as well as careers emerging during continued implementation of the Affordable Care Act.

Would Duke SOM MD program give preference to applicants who went through the MBS?

Successful students will have thrived working with Duke SOM faculty in our setting with similar course demands. However, we're not creating a "Duke specific" pool through preferential treatment; a number of our students and graduates have demonstrated that they are excellent candidates at Duke and at other schools as well, including Creighton, University of South Carolina (Greenville and Columbia programs), Edward Via, Case Western, University of Rochester, University of Maryland; and dental schools at the University of Tennessee, Virginia Commonwealth and Tufts University.

The Duke SOM faculty have an entire academic year, not just an interview day, to learn about who our students are as individuals and to assess their conscientiousness and professionalism, the "intangibles" that are tougher to demonstrate in an application.

How will students manage the additional financial burden?

In keeping with existing School of Medicine practice, the program will direct a portion of its revenues to scholarship support, both academic and need-based, for selected students. Students in the program also will be eligible for federal financial aid. MBS students will have the opportunity to attend debt management workshops held yearly on campus and have access to an educational list serve run by a consultant who previously worked with the AAMC in student financial services. They have the option of one on one consultation. The School of Medicine currently provides these resources for all MD, PA, and PT students; residents and fellows.

How will the MBS contribute to diversity?

One of the visions we have for our MBS program is to contribute to diversification of the nation's health care workforce. We have been successful building upon the successes of our MD and PA Programs by recruiting over thirty percent of our incoming classes from underrepresented minority populations (including Native American, Hispanic, and African American) in our first two entering cohorts. Our Senior Advisor has longstanding relationships with diverse organizations and institutions built upon years of outreach and networking for the School of Medicine.

What "evidence based educational practices" are utilized in the MBS degree program?

Evidence based educational practices are teaching, learning and assessment practices shown through research to improve value, efficacy, and outcomes. The Duke MBS curriculum intentionally incorporates a number of such strategies.

- Flipped classroom techniques increase engagement with materials and faculty.
- Team-based learning improves performance.
- Gross anatomy with cadaveric dissection enhances subsequent academic performance.
- Service learning enhances cognitive skills development.
- Professionalism is best taught explicitly and situated in the context in which it is practiced.
- EMT training early in professional education increases confidence and professional formation.
- Post-bac graduates are more likely to enter practice in underserved areas.
- Early clinical immersion improves integration of skills and knowledge.
- Using questions improves learning beyond their use as an assessment strategy.

WE ENCOURAGE PROSPECTIVE APPLICANTS TO LEARN MORE ABOUT OUR PROGRAM FROM CURRENT STUDENTS AND FACULTY BY VISITING THE DUKE MBS YOUTUBE CHANNEL.