

Biomedical Sciences (MS)

This program is offered by the College of Science and Health and is only available at the St. Louis main campus.

Program Description

The MS in Biomedical Sciences degree provides students graduate level coursework in disciplines related to the biomedical sciences, advanced healthcare education, or scientific research. Students in this program will expand on knowledge gained during undergraduate studies to strengthen knowledge, comprehension, and analysis of concepts related to the biomedical sciences and human health. In addition to learning biomedical concepts, students will also further develop critical thinking skills, essential for success in a diverse range of careers.

Through this program, students can pursue continued study in advanced clinical training programs and professions (such as medical, dental, veterinary, physician assistant, etc) and/or research-focused pursuits through development of critical thinking skills. The core curriculum includes advanced human anatomy and physiology, microbiology, pharmacology, and immunology. Additionally, varied options of elective courses enable students to tailor this program to individual educational and professional needs and aspirations.

The curriculum spans one year of continuous, full-time enrollment starting every Summer term with an annual application deadline of April 15th. Core curriculum classes are held during the day.

Quality Outcomes

Upon completion of the program, students should be able to:

- Demonstrate a deep and integrated understanding of the biological sciences and their implication to the advancement of health and biomedical science.
- Employ critical analysis and reasoning skills and the application of these skills to the design and execution of scientific inquiry relevant to specific biomedical disciplines.
- Generate and effectively communicate scientific knowledge relevant to specific biomedical disciplines (medical, dental, pharmaceutical, etc).
- Develop a commitment to life-long learning and career pursuits within health and biomedical science disciplines.
- Foster a commitment to health equity and ethics.

Program Curriculum

Required Courses (27 Credit Hours)

- CHEM 7500 Biochemistry (3 hours)
- BIOL 7200 Advanced Anatomy and Physiology I (3 hours)
- BIOL 7201 Advanced Anatomy and Physiology I Lab (1 hour)
- BIOL 8000 Advanced Anatomy and Physiology II (3 hours)
- BIOL 8001 Advanced Anatomy and Physiology II Lab (1 hour)
- BIOL 8100 Advanced Anatomy and Physiology III (3 hours)
- BIOL 8101 Advanced Anatomy and Physiology III Lab (1 hour)
- BIOL 7500 Immunology (3 hours)
- BIOL 7600 Cell Biology (3 hours)
- BIOL 8400 Advanced Pathophysiology (3 hours)
- DNAP 7900 Pharmacology I (3 hours)
- BIOL 6800 Biomedical Sciences Exit Survey (0 hours)

In addition, the student chooses at least 9 credits of elective courses from the following list:

- BIOL 7700 Genetics (1 hour)
- BIOL 7800 Microbiology (3 hours)
- BIOL 7900 Biomedical Bench Research (1-3 hours)
- DNAP 6400 Population Health and Epidemiology (2 hours)
- DNAP 8000 Advanced Pharmacology (3 hours)
- DNAP 8230 Politics and Economics of Health Care (3 hours)
- DNAP 8240 Health Care Policy Analysis and Advocacy (3 hours)
- DNAP 8430 Health Administration Law and Ethics (3 hours)
- DNAP 8700 Pharmacogenomics (2 hours)
- HLTH 5000 Organization and Management Health Administration (3 hours)
- HLTH 5050 Financial Management in Health Administration (3 hours)
- HLTH 5100 Statistics for Health Administration (3 hours)
- SCML 5050 Communication for Science Management and Leadership (3 hours)
- SCML 5100 Technical Writing for Sciences (3 hours)
- SCML 5850 Regulatory and Qualitative Affairs for Science Management and Leadership (3 hours)

General Requirements

Academic Performance

Students must earn a minimum cumulative GPA of 3.0 during the course of study and are permitted only one course grade of C. There is a zero-tolerance policy on breeches of academic integrity, such as cheating, plagiarism, etc.

General Requirements

Due to the 12 month, continuous cohort enrollment completion of the courses will occur in the sequence prescribed by the program for the cohort group in which enrolled; deviations from this sequence, or enrollment without admission to the program require special permission from the program director.

Students in the program are subject to the policies and procedures for graduate studies for Webster University.

Continuous Enrollment

Graduate students enrolled in the MS in biomedical sciences program must maintain continuous enrollment, or request special permission from the program director.

Admission

See the Admission section of this catalog for general admission requirements. Students interested in applying must submit their application online at www.webster.edu/ apply. Transcripts should be sent from your institution electronically to transcripts@webster.edu. If this service is not available, send transcripts to:

Office of Admission
Webster University
470 E. Lockwood Ave.
St. Louis, MO 63119

Additional Requirements

Requirements for admission to the MS in biomedical sciences program include:

- Bachelor's degree and minimum 3.0 GPA on a 4.0 scale.

Biomedical Sciences (MS)

- Completion of at least 16 credit hours of courses in biological sciences, including microbiology, anatomy and physiology, organic chemistry, physics and statistics.
- Official transcripts from **all** universities, colleges and professional schools.
- A one-page Statement of Purpose* explaining why you have chosen to pursue biomedical sciences, including any relevant information you would like the Admissions Committee to consider regarding your career goals.
- Prerequisite Review Worksheet* completed from the electronic application checklist.

***These required materials must be electronically uploaded to the application account.**

Application Process

Submit all required documents **by April 15th** for the Summer start.

Advancement to Candidacy

Students are admitted to their graduate program upon completion of all admission requirements. Students are advanced to candidacy status after successfully completing 12 credit hours with a cumulative GPA of 3.0 or higher. In specialized programs, courses required as prerequisites to the program do not count toward the 12 credit hours required for advancement.