

# BIOMEDICAL SCIENCES, MA

The Master of Arts in Biomedical Sciences (MABS) degree is a 26 credit hour, 9 month program that was designed to help students enhance their understanding of the biological disciplines that are the intellectual foundation for medical school or other professional health science programs. The program also builds formal skills in analyzing the biomedical literature and ethical questions that impact the medical profession. It is appropriate for students with a good overall medical school/professional school application package who need an additional opportunity to demonstrate their ability to master challenging coursework.

Students in the MABS degree program receive:

- Rigorous graduate-level coursework in the biological sciences designed to strengthen a student's preparation for medical school/professional school.
- An academic environment that fosters a supportive community among students.
- Shadowing opportunities that enhance student skills before matriculating to medical school/professional school.
- Personal attention from faculty to maximize success in their classes.
- Advising services from the Pre-Health Professional advisor. This advisor will also work closely with students to optimize their application packages.

## Admission

Applicants should consult the graduate admission resources (<https://www.roosevelt.edu/admission/graduate/>) on the Roosevelt University website for information on the application process. The graduate program director and department faculty members will evaluate each applicant's individual record of academic achievement, professional experience, and self-assessment. Weakness in one or more areas of preparation will not preclude a positive admission decision. Admissions decisions are at the discretion of the graduate program director and department chair.

## APPLICATION MATERIALS

### REQUIRED DOCUMENTS

- **Graduate application:** Application (<https://www.roosevelt.edu/admission/apply/>) to the College of Science, Health and Pharmacy at Roosevelt University.
- **Transcript(s):** Unofficial transcripts from all undergraduate and graduate institutions attended. International applicants must submit official transcripts, and all applicants must have official transcripts on file before starting graduate studies.
- **Proof of English language proficiency (for international students):** See the University English Language Proficiency requirement (<https://www.roosevelt.edu/admission/international/english-language-proficiency/>) for details. Applicants can receive an admissions decision if this requirement is not met, but may need to complete ELP coursework before they begin graduate studies.

### OPTIONAL DOCUMENTS

- **Resume/Curriculum vita:** A detailed account of academic and extracurricular experiences. Include employment, teaching, leadership, and research experiences as appropriate.

- **Letter of intent:** A brief (one-page) personal statement which outlines personal and professional goals.
- **Letter of recommendation:** Referees may include professors, academic advisors, employment supervisors, or others familiar with the applicant's preparation for graduate study.
- **Official GRE, MCAT, PCAT or DAT score:** Official score in one of the graduate admissions tests that are no more than three years old.

## Pre-requisites

Applicants to the MA Biomedical Sciences program must hold a bachelor's degree with a minimum cumulative **GPA of 2.75** (4.0 scale) and should have completed the minimum academic requirements described below for college credit.

- **Mathematics** - one year, one semester of calculus recommended
- **Chemistry** - four courses, including two courses in general (inorganic) chemistry and two courses in organic chemistry
- **Physics** - two courses, including coverage of classical mechanics, oscillations & waves, thermodynamics, electricity and magnetism
- **Biology** - minimum one course beyond introductory biology. Given the rigorous nature of our graduate coursework, students are strongly encouraged to have undergraduate biochemistry, anatomy/physiology, and/or microbiology courses in addition to the required courses.

Students lacking prerequisite coursework may be admitted provisionally until outstanding courses have been completed satisfactorily (grade of B- or better). None of the prerequisite courses may be used toward fulfillment of the requirements for the master's degree.

## CREDIT POLICIES

Graduate transfer credit (up to 6 credit hours) may be applied to the MA Biomedical Sciences degree within one semester of admission. *Credits from a previously earned degree are not transferable.* Exceptions to specific course requirements may be granted to students who have previously completed graduate coursework in a related area and who maintain good academic standing after one semester of study at Roosevelt.

## Advising

New students must consult with the graduate program director and pre-health professions advisor upon admission to the graduate program. Each year's course schedule is drawn from a suite of approved courses for the program. Students should consult the pre-health professions advisor to determine the optimum set of courses to advance their professional school preparation.

## Requirements

All students must complete 26 credit hours to earn the MA Biomedical Sciences degree, including courses in topics of Biology and/or Biochemistry at 400 level.

All students are **required** to take BIOL 443 CLINICAL BIOETHICS AND MEDICAL LITERATURE and must also take at least one course with a lab section.

Always work closely with your academic advisor to understand curriculum requirements and scheduling, as each student's academic plan can look slightly different. *Minimum grade required is a B.* No more than two grades of C (not C-) may be applied toward the 26 hours used for the degree. *Must maintain a 3.0 cumulative GPA.*

Code	Title	Credit Hours
<b>Core Requirements</b>		
BIOL 443	CLINICAL BIOETHICS AND MEDICAL LITERATURE	3
Select one course with lab section		5
<b>Students must complete their remaining credit hours in a curriculum drawn from the following courses:</b>		<b>18</b>
BIOL 401	HUMAN CADAVER ANATOMY	
BIOL 404	HISTOLOGY & ULTRASTRUCTURE	
BIOL 414	QUANTITATIVE ECOLOGY & CONSERVATION	
BIOL 423	TROPICAL BIOLOGY	
BIOL 424	MARINE BIOLOGY	
BIOL 425	VIROLOGY	
BIOL 430	PHYSIOLOGY: MECHANISMS AND DISORDERS	
BIOL 432	ECOLOGY OF TALLGRASS PRAIRIES	
BIOL 437	NUTRITION IN AMERICA	
BIOL 439	EVOLUTIONARY PHYSIOLOGY	
BIOL 450	CANCER BIOLOGY	
BIOL 451	GENERAL GENETICS	
BIOL 453	MOLECULAR BIOLOGY	
BIOL 456	DEVELOPMENTAL BIOLOGY	
BIOL 458	CELL BIOLOGY	
BIOL 460	MICROBIOLOGY	
BIOL 463	INTRODUCTION TO GENOME ANALYSIS	
BIOL 467	IMMUNOLOGY	
BIOL 468	RESEARCH METHODS	
BIOL 480	APPLICATIONS OF BIOTECHNOLOGY	
BIOL 481	BIOLOGY OF BIRDS: ORNITHOLOGY	
BIOL 482	BIOTECHNOLOGY INDUSTRY PRACTICE	
BIOL 483	SPECIAL TOPICS IN BIOLOGY	
BIOL 491	BIOLOGY INTERNSHIP	
BCHM 420	PHYSICAL CHEMISTRY FOR BIOSCIENCE	
BCHM 422	FERMENTATION SCIENCE	
BCHM 444	BIOINORGANIC CHEMISTRY	
BCHM 455	BIOCHEMISTRY	
BCHM 456	EXP. MTHDS BIOCHEM & BIOTECH	
BCHM 457	ADVANCED BIOCHEMISTRY	
BCHM 493	BIOCHEMISTRY SEMINAR	
<b>Total Credit Hours</b>		<b>26</b>

## SAMPLE COURSE SEQUENCE

The schedule below is provided as an example. Individualized schedules will be developed for each student in consultation with faculty advisors.

Fall	Credit Hours Spring	Credit Hours
Cell Biology	3 Clinical Bioethics & Medical Literature	3
Genetics	3 Immunology	3
Microbiology (with lab)	5 Medical Internship	3

Developmental Biology	3 Cancer Biology	3
<b>14</b>		<b>12</b>

### Total Credit Hours 26

Your degree map is a general guide suggesting courses to complete each term on the academic pathway to your degree. It is based on the most current scheduling information from your academic program. Your program's degree map is reviewed annually and updated as schedules change (although you retain the same course requirements as long as you are continuously enrolled in your degree program).

Fall	Credit Hours Spring	Credit Hours
BIOL OR BCHM 4XX	3 BIOL 443	3
BIOL OR BCHM 4XX	3 BIOL OR BCHM 4XX	3
BIOL OR BCHM 4XX	3 BIOL OR BCHM 4XX	3
BIOL OR BCHM 4XX	3 BIOL OR BCHM 4XX w/ Lab	5
<b>12</b>		<b>14</b>

### Total Credit Hours 26