

## MEDICAL SCIENCE M.S.

All students must meet the Requirements for the Master's Degree

### OVERVIEW

The goal of the Master of Science in Medical Science Program is to provide a rigorous curriculum in the basic biomedical sciences that prepares students with the background knowledge and skills required to gain acceptance into and succeed in healthcare-related professional degree programs such as medical, dental, or pharmacy programs. The program offers a cohesive set of core courses in biomedical disciplines that together provide foundational understanding of human structure and function. Courses provide graduate-level training in biochemistry, cell biology, anatomy, and physiology as well as pharmacology and evidence-based medicine.

The faculty below are UVM faculty in addition to those who have been formally appointed Graduate Faculty members:

- Akselrod, Dmitry; Associate Professor, Department of Radiology; MD, SUNY Upstate Medical University
- Geeslin, Matthew; Assistant Professor, Department of Radiology; MD, University of Minnesota
- Hielscher, Abigail; Associate Professor, Department of Neurological Sciences; PhD, University of Nebraska
- Jebbett, Nathan; Assistant Professor, Department of Neurological Science; PHD, University of Vermont
- McBride, Carole Anne; Assistant Professor, Department of Obstetrics Gynecology&Reprod; PHD, University of Vermont
- Spear-Bishop, Estelle; Assistant Professor, Department of Neurological Sciences; PHD, University of Vermont

### Specific Requirements

### Requirements for Admission to Graduate Studies for the Degree of Master of Science

Applicants are required to have a B.S. or B.A. from accredited college or university, 2 semesters of general biology, general physics, general chemistry, and organic chemistry. International Students are required to submit scores for TOEFL or IELTS.

### Minimum Degree Requirements

UVM's Master of Medical Science degree is a 30-credit program that is designed to be completed within 1 year (12 months). Students complete Core Course Requirements, 1 anatomy, 1 biostatistics, 1 pharmacology, and additional electives to complete the 30-credit program.

Core Courses:		
BIOC 6001	General Biochemistry I	3
BIOC 6002	General Biochemistry II	3
MPBP 6010	Human Physiology & Pharm I	4
PH 6030	Biostatistics I:App Rsch in PH	3

The following cell biology course:		
CLBI 6010	Cell Biology	3
or PHRM 6060	Medical Cell Biology	
The following pharmacology course:		
PHRM 6080	Integrative Physiol. & Pharm.	3
or PHRM 6010	Applied Systems Pharmacology	
1 from the following anatomy courses:		
ANNB 6000	Human Gross Anatomy	6
RAD 6890	Human Anatomy via Radiology	3
Choose at least 2 electives from the following or other health-related courses approved by the Director (core and elective credits must combine for an overall total of at least 30 credits):		
BIOC 6051	Proteins I: Structure&Function	
BIOC 6072	Cancer Biology	
MPBP 6100	Molecular Control of the Cell	
MPBP 6900	Medical Master's Capstone (only 1 Capstone course allowed)	
NSCI 6020	Neuroscience	
OBYG 5000	Understanding Human Pregnancy	
PATH 6280	Techniques in Microscopy	
PH 6010	Public Health & Health Policy	
PH 6020	Epidemiology I	
PH 6030	Biostatistics I:App Rsch in PH	
PH 6040	Environmental Public Health	
PH 6060	Social&Behavioral Public Hlth	
PH 6070	Epidemiology 2	
PH 6120	Food Systems & Public Hlth	
PH 6220	One Health: Zoonoses	
PHRM 5400	Molecules & Medicine	
PHRM 6050	Milestones in Pharmacology	
PHRM 6900	Medical Master's Capstone (only 1 Capstone course allowed)	

LCOM Medical Student Program Transfer to Medical Science M.S.: Larner College of Medicine (LCOM) medical students who wish to withdraw from the Vermont Integrated Curriculum may transfer up to 30 qualifying credits from their pre-clinical courses to the Graduate College Medical Science M.S. program. Applicants

submit a program transfer request to the Dean of the Graduate College, with approval from the LCOM Dean of Students.

**Comprehensive Examination**

Students must complete a comprehensive exam, integrating their knowledge of core course material in a written paper, by their end of their final semester in the program.

**Requirements for Advancement to Candidacy for the Degree of Master of Science**

Successful completion of a comprehensive examination in Medical Science.