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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOC 6001</td>
<td>General Biochemistry I</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 6002</td>
<td>General Biochemistry II</td>
<td>3</td>
</tr>
<tr>
<td>MPBP 6010</td>
<td>Human Physiology &amp; Pharm I</td>
<td>4</td>
</tr>
<tr>
<td>PH 6030</td>
<td>Biostatistics I: App Rsch in PH</td>
<td>3</td>
</tr>
</tbody>
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The following cell biology course:

- CLBI 6010 Cell Biology
- or PHRM 6060 Medical Cell Biology

The following pharmacology course:

- PHRM 6080 Integrative Physiol. & Pharm.
- or PHRM 6010 Applied Systems Pharmacology

1 from the following anatomy courses:

- ANNB 6000 Human Gross Anatomy
- RAD 6890 Human Anatomy via Radiology

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
- OBGY 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.