

PATHOLOGY M.S.

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

OVERVIEW

The Department of Pathology offers thesis-based and non-thesis Master of Science degrees. The thesis-based M.S. degree is a course and research based program, with 24 credits in coursework, and 6 credits of research culminating in a written thesis and defense. A non-thesis M.S. degree requires 30 credits in coursework, but does not require a thesis or thesis defense. Research interests in the Department of Pathology are diverse, with special emphasis on Environmental Pathology and Cardiovascular Molecular Epidemiology.

SPECIFIC REQUIREMENTS

Requirements for Admission to Graduate Studies for the Degree of Masters of Science

Students should apply for admission into the master's in pathology program by March 15. Admission into this program requires the following:

- Satisfactory undergraduate or graduate course work in chemistry, organic chemistry, and the biological sciences
- Satisfactory scores on the Graduate Record Examination (GRE) general exam or the Medical College Admission Test (MCAT)
- Completion of the UVM graduate college application
- Three letters of recommendation that attest to the student's intellectual maturity, oral and verbal communication skills, and their aptitude for studies towards an advanced degree in this area

Program Learning Outcomes for Students

- Attain a core set of knowledge within pathology and molecular biology.
- Engage in a hypothesis based approach to pathology research (thesis track).
- Think independently, creatively, and critically about established scientific findings and new discoveries in pathology.
- Become effective written and oral communicators of science.
- Successfully prepare for pathology-based careers in patient care, translational and basic science research, and biomedical education.

Minimum Degree Requirements

A minimum of 30 credits with a minimum GPA of 3.00 and successful completion of a comprehensive oral exam are required for a master's degree in pathology. Students enrolled in the thesis-based program must also write, present and successfully defend their research thesis. Students must also meet the Graduate College requirements for the Master's Degree.

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| Thesis Track (Core curriculum - 30 credit hrs) | |
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| PATH 303 | Translational Pathology | 3 |
| PATH 305 | Molecular Mech Environ Disease | 3 |
| CLBI 301 | Cell Biology | 3 |
| NSCI 327 | Resp Conduct in Biomed Rsch | 1 |
| PATH 391 | Master's Thesis Research | 6-15 |
| Grant Proposal | | |
| Additional elective courses, after consultation with thesis advisor, including but not limited to: | | |
| CTS 301 | Design Clin&Translational Res | 3 |
| PHRM 272 | Toxicology | 3 |
| CLBI 295 | Special Topics | 1-18 |
| PATH 304 | Human Molecular Genetics | 3 |
| PATH 325 | Genetics for Clinicians | 3 |
| MPBP 325 | Data Analysis&Presentation I | 2 |

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|--|--------------------------------|------|
| Non-Thesis Track (Core curriculum - 30 credit hrs) | | |
| PATH 303 | Translational Pathology | 3 |
| PATH 305 | Molecular Mech Environ Disease | 3 |
| CLBI 301 | Cell Biology | 3 |
| Additional approved courses (21 credit hrs) | | |
| Comprehensive Oral Examination | | |
| Additional elective courses, after consultation with thesis advisor, including but not limited to: | | |
| PATH 330 | Pathology Rotations | 3-9 |
| CTS 301 | Design Clin&Translational Res | 3 |
| PHRM 272 | Toxicology | 3 |
| CLBI 295 | Special Topics | 1-18 |
| PATH 304 | Human Molecular Genetics | 3 |
| PATH 325 | Genetics for Clinicians | 3 |
| MPBP 325 | Data Analysis&Presentation I | 2 |

Comprehensive Examination

A written examination is taken following completion of the core courses listed above.

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

Completion of core courses listed above and passing the comprehensive examination.