

## PATHOLOGY

<http://www.med.uvm.edu/pathology> (<http://www.med.uvm.edu/pathology/>)

### OVERVIEW

The Department of Pathology is actively engaged in both undergraduate and graduate courses focusing on general and systemic pathology as well as mechanisms of environmental disease. Opportunities include courses on special techniques of translational pathology as well as molecular mechanisms of environmental disease. Numerous research opportunities are available in collaboration with the dynamic and engaged faculty.

### DEGREES

- Pathology M.S. (<http://catalogue.uvm.edu/graduate/pathology/pathologym/s/>)

### FACULTY

**Chang, Martin;** Associate Professor, Department of Pathology and Laboratory Medicine; M.D., PHD, University of Toronto  
**Fung, Mark K.;** Professor, Department of Pathology and Laboratory Medicine; MD, PHD, University of Alabama School of Medicine  
**Harm, Sarah;** Associate Professor, Department of Pathology and Laboratory Medicine, MD, Jefferson Medical College  
**Stowman, Anne;** Assistant Professor, Department of Pathology and Laboratory Medicine, MD, University of Minnesota  
**Taatjes, Douglas Joseph;** Professor, Department of Pathology and Laboratory Medicine; PHD, University of Basel  
**Wilcox, Rebecca;** Associate Professor, Department of Pathology and Laboratory Medicine, MD, Oregon Health Sciences University  
**Zhang, Bei;** Associate Professor, Department of Pathology and Laboratory Medicine; MD, Shandong University School of Medicine; PHD, Southern Illinois University School of Medicine; MLS, Thomas University

### Courses

#### **PATH 300. Biomedical Research Design. 1 Credit.**

Covers the anatomy of research: what it is made of; and the physiology of research: how it works. Introduces techniques and strategies of research design, implementation, and interpretation. Provides basic tools needed to understand how research in pathology is conducted.

#### **PATH 307. Molecular Pathology. 3 Credits.**

Covers mechanisms of disease, molecular biology and genetics, diagnostic molecular pathology, as well as principles, tools and applications in research of molecular pathogenesis. Prerequisite: PATH 300.

#### **PATH 308. Pathology Journal Club. 1 Credit.**

Develops ability to read and present findings communicated in peer-reviewed research articles at the level necessary to formulate and plan independent research. Co-requisites: PATH 300, PATH 303, or Instructor permission.

#### **PATH 309. Pathology Grand Rounds. 1 Credit.**

Develops ability to prepare and deliver research presentations/Grand Rounds, and to participate in Grand Rounds discussion by critically reading related literature. Builds on the reading skills developed in PATH 308. Prerequisites: PATH 300, PATH 303, PATH 308, or Instructor permission.

#### **PATH 310. Clinical Genomic Medicine. 1 Credit.**

Covers the basic concepts of genomic medicine and its clinical application, procedures and techniques of clinical molecular testing, and management of a clinical molecular laboratory; focuses on diagnostic molecular testing on solid tumors, hematopathology, constitutional disorders, and pharmacogenomics. Prerequisite: PATH 330 or Instructor permission; experience in either clinical or anatomic pathology required.

#### **PATH 325. Genetics for Clinicians. 3 Credits.**

Provides an overview of contemporary human genetics and genomics with application to clinical practice. Prerequisite: Graduate standing. Cross-listed with: GRNS 325.

#### **PATH 328. Techniques in Microscopy. 3 Credits.**

Introduces many of the microscopy systems and techniques available in the Microscopy Imaging Center core facility in the Larner College of Medicine at UVM.

#### **PATH 330. Pathology Rotations. 3-9 Credits.**

Laboratory practicum for Pathology Master's students. Engages students in clinical and anatomic pathology laboratory rotations under supervision of attending physicians and senior residents in the University of Vermont Medical Center Pathology Department.

#### **PATH 331. Pathology Clinical Practice. 1 Credit.**

An opportunity to become familiar with how pathologists work in a team with other clinicians to solve difficult problems in clinical practice. Prerequisites: PATH 300.

#### **PATH 390. Internship. 1-18 Credits.**

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

#### **PATH 391. Master's Thesis Research. 1-18 Credits.**

#### **PATH 392. Independent Study. 1-18 Credits.**

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

#### **PATH 394. Independent Graduate Research. 1-18 Credits.**

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

#### **PATH 395. Advanced Special Topics. 1-18 Credits.**

Special Topics in Pathology. Prerequisites: Graduate Students, Department Permission Immunology (MMG 223) desirable. Alternate year course with PATH 305.