

Graduate Medical Sciences

Master of Science in Pathology Laboratory Sciences



Program Overview

The 32-credit MS in Pathology Laboratory Sciences program will prepare you to successfully design, perform, and evaluate research in basic science, biotechnology and other biomedical laboratories. You will learn to prepare and evaluate animal or human cells and tissues for the effects of test compounds, devices, or procedures using morphologic methods. This is a great program for those who want to help advance biomedical knowledge to improve patient care.

Master Common Research Techniques

Techniques include gross, microscopic, and ultrastructural examination of cells and tissues, including histochemical staining, immunohistochemical and immunofluorescence methods for examination of blood and tissue fluids or their extracts.

In addition, students have the opportunity to learn one or more specialized techniques, including laser capture microdissection, *in situ* hybridization including fluorescence detection (FISH) and confocal or electron microscopy and image analysis.

Our students come from a diverse background of experiences and nationalities. We offer a high quality, graduate-level education in a supportive environment. All our students have gone on to tertiary level programs (Medical or Graduate School) or are employed as Lab Managers or Senior Level technical staff.

- Chris Andry, MPhil, PhD
Vice Chair for Operations and Management
Department of Pathology and Laboratory Medicine



Program Highlights

- Learn how to use morphologic, biochemical and molecular methods to conduct research on human and animal biospecimens
- Understand how to dissect, document, preserve, process and archive biospecimens
- Work in state-of-the-art laboratories (BSL-2 laboratory environments)
- Develop hypotheses and perform assays to generate experimental results
- Choose a mentor and lab at which to complete a research thesis
- Eight-semester program can be completed in two years
- Courses taught by world-class faculty from the Boston University School of Medicine
- Department has 150-year history of graduate-level education
- Supportive environment with available program advisors and tutors to support each student's success
- The degree is awarded by Graduate Medical Sciences at Boston University School of Medicine

Curriculum

Required Courses	Semester	Credits
Principles of Basic and Applied Pathology	Fall	2
Pathology Seminar	Fall	2
Seminar in the Business of Science	Fall	4
Biochemistry	Fall	6
Biostatistics	Fall	2
Pathology Lab Rotations	Fall & Spring	2
Pathology Research	Fall & Spring	Varies
Medical Immunology	Spring	2
Pathology Basic and Experimental Pathology	Spring	4
Special Topics in Pathology	Spring	2
Human Biospecimens for Research*	Spring (every other year)	2

Note: Histology and Molecular Biology courses are highly recommended, but not mandatory

**Optional*

Application Requirements

- A Bachelor's degree (or higher) from a recognized college or university
- High GPA in courses in chemistry, biology, physics and calculus
- Graduate Record Examination (GRE) scores and TOEFL scores if English is not your native language (600 is the minimum accepted TOEFL score). MCAT scores may be substituted for GRE scores.
- Written personal statement

To apply to the program, please visit bu.edu/gms/admissions.

Tuition, Financial Aid and Student Resources

For the most up-to-date information on tuition and fees, please visit <https://www.bumc.bu.edu/gms/admissions/student-financial-services/>.

The Financial Aid Office at Boston University School of Medicine is available to assist students identifying sources of financial support. For more details, please visit bumc.bu.edu/osfs.

The BU Office of Housing Resources provides information regarding housing, transportation, and Boston neighborhoods. For more details, visit www.bumc.bu.edu/ohr.

Contact

For more information, please contact:

Liz Duffy, MA
Assistant Professor, Department of Pathology
Director of Masters Program
670 Albany St., Room 404
Boston, MA 02118

Telephone: (617) 358-2677
Email: eschul@bu.edu

<https://www.bumc.bu.edu/busm-pathology/graduate-program/master-of-science-in-pathology/>