

# MOLECULAR AND CELLULAR PATHOBIOLOGY, MS

The MS Programs in Pathology at Tulane University are designed for students with a baccalaureate degree in science who are seeking advanced training in the health sciences, typically in preparation for pursuit of a professional degree (e.g. Medical, Dental, Physician Assistant, Pharmacy, Veterinary Medicine, Ph.D.) or for preparation to work in academia or biotechnology. Undergraduate courses in biology and chemistry are prerequisites.

This program is also useful to individuals in academia that wish to understand recent advances in biomedical science. Foreign students with a medical degree that wish to develop research skills are also encouraged to apply to this program. We offer two different programs of study for the MS degree, a one-year program in Molecular Medicine and a two-year program in Molecular and Cellular Pathobiology.

The objective of the graduate program is to provide students with opportunities to study the cellular and molecular mechanisms of human diseases through didactic teaching and research training. We have developed two Master of Science (MS) programs, which are designed not only to enhance the academic credentials for individuals wishing to pursue a career in a health-related science, but also to ease the transition to medical/graduate school.

The Masters in Molecular and Cellular Pathobiology is a full-time two-year post-baccalaureate program leading to a Master of Science in Molecular and Cellular Pathobiology. This program is designed to enrich the scientific research experience and improve the academic credentials of students interested in careers in the biotech and pharmaceutical industries, as well as in academia. The degree requirements in this program include 30 credit hours of coursework with a cumulative GPA greater or equal to 3.0, plus preparation and successful defense of a thesis. In the second year, students will conduct mentored research in the Department of Pathology. Recipients of the Master of Science in Molecular and Cellular Pathobiology will demonstrate advanced knowledge in the molecular and cellular basis of disease and develop quantitative and qualitative research skills in data collection and analyses. Graduates of this program will possess the required skills to conduct independent research.

Questions regarding the program can be addressed to the Program Coordinator (Roberto Diaz del Valle, [roberto@tulane.edu](mailto:roberto@tulane.edu)), Program Director (Dr. Haitao Zhang, [hzhang@tulane.edu](mailto:hzhang@tulane.edu)) or Co-Director (Dr. Gilbert Morris, [gmorris2@tulane.edu](mailto:gmorris2@tulane.edu)).

## Requirements

### Year 1 Fall Semester

Course ID	Title	Credits
BMSP 6050	Advanced Cell Biology - MS	3
PATH 6300	Mechanisms of Disease 1	5
MSCR 7070	Molecular Medicine	4
PATH 2003	Advances in Pathology Research	1

Electives totaling 2 credits

### Year 1 Spring Semester

Course ID	Title	Credits
PATH 6310	Mechanisms of Disease 2	5
PATH 2003	Advances in Pathology Research	1
PATH 6400	Molec & Cellular PATH	4

Electives totaling 5 credits

### Year 2 Fall and Spring Semester

Course ID	Title	Credits
PATH 2003	Advances in Pathology Research	1
BMSP 7990	Independent Study	1-6
PATH 9980	Pathology Master's Research	6

Independent Study is 2 Credits for a total of 9 each semester