

MASTER OF SCIENCE (M.S.)

The master's degree is offered only under special circumstances and upon recommendation by the program COGS and approval by the Graduate Dean.

IMPORTANT Note About the Doctor of Philosophy in Molecular Medicine Degree

This program is no longer accepting students at this time as this field of study is now the Cell Biology, Genetics and Molecular Medicine discipline within the new Integrated Biomedical Sciences (IBMS) Program. All information in this section of the Catalog is for the current Molecular Medicine students only.

The program in Molecular Medicine offers a research oriented, interdisciplinary course of study leading to the M.S. and Ph.D. degrees. The faculty is composed of both basic and clinical scientists drawn from the Departments of Biochemistry, Cellular and Structural Biology, Medicine, Molecular Medicine, Surgery, Pathology, and Physiology. The objective of the program is to train future scholars in the use of molecular biological approaches for the investigation of fundamental biomedical questions associated with the diagnosis and treatment of human diseases. Through completion of the program, students will have the opportunity to prepare for careers as independent investigators and teachers in cellular and molecular medicine.

The research interests of the faculty cover many areas of molecular and cell biology, including the molecular genetic basis of cancer and tumorigenesis, mechanisms of cancer metastasis, animal models of disease, transcriptional regulation, developmental, bone cell biology in health and disease, mouse genetics, molecular biological basis of aging, DNA repair, genetic recombination, eukaryotic cell-cycle regulation, protein structure, protein degradation, and signal transduction.

The laboratories of the molecular medicine program faculty members are located in The University of Texas Institute of Biotechnology and the Institute for Drug and Development in the Health Science Center. State-of-the-art facilities for cellular and molecular biological research and biochemistry are also available, as well as specialized instrumentation required for electron, fluorescence, confocal, and atomic force microscopy, the generation of transgenic and chimeric mice; biomolecular interaction studies; biopolymer synthesis; peptide and nucleic acid sequencing; and protein purification.

Molecular Medicine Degree Requirements

A minimum of 30 credit hours and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, all master's candidates must register for MMED 6098 Thesis for at least one semester in order to graduate. The student must successfully defend a thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Molecular Medicine Plan of Study

First Year

Fall	Credit Hours
MMED 5019 Graduate Colloquium In Molecular Medicine	1
MMED 6016 Advanced Molecular Cell Bio	5
MMED 5015 Modern Methods in Cell and Molecular Biology	1

MMED 6097 Research	1-12
Total Credit Hours:	8.0-19.0

First Year

Spring	Credit Hours
MMED 5001 Molecular Medicine	3
MMED 6097 Research	1-12
Comprehensive exam	
Total Credit Hours:	4.0-15.0

Second Year

Fall	Credit Hours
MMED 6091 Seminars On Molecular Medicine	1
MMED 6071 Supervised Teaching	1-9
MMED 6097 Research	1-12
Total Credit Hours:	3.0-22.0

Second Year

Spring	Credit Hours
MMED 6091 Seminars On Molecular Medicine	1
MMED 6071 Supervised Teaching	1-9
MMED 6097 Research	1-12
Total Credit Hours:	3.0-22.0

Third Year

Fall	Credit Hours
MMED 6091 Seminars On Molecular Medicine	1
MMED 6098 Thesis	1-12
Total Credit Hours:	2.0-13.0

Third Year

Spring	Credit Hours
MMED 6091 Seminars On Molecular Medicine	1
MMED 6098 Thesis	1-12
Total Credit Hours:	2.0-13.0

Molecular Medicine Objectives/Program Outcomes

1. Proficiency in fundamental biological principles
2. Critically review and interpret research literature
3. Communicate effectively in writing
4. Communicate effectively in verbal presentation
5. Conduct independent research in an ethical manner