

Doctor of Philosophy with a Major in Molecular Oncology and Immunology (Term by Term)

Year One Biomedical Science Common Core Curriculum

Students are admitted via a common admissions process to the Biomedical Sciences PhD program, not to a specific biomedical major. After completing the first-year common core course work and laboratory rotations, students choose a dissertation research mentor and enter one of nine Doctor of Philosophy majors.

Fall Semester: 15 Hours

BIOM 8011 - Responsible Conduct of Research (1 Credit Hour)
BIOM 8021 - Biochemistry and Gene Regulation (5 Credit Hours)
BIOM 8022 - Molecular Cell Biology (5 Credit Hours)
BIOM 8040 - Introduction to Faculty Research (2 Credit Hours)
BIOM 8050 - Introduction to Research I (2 Credit Hours)

Spring Semester: 15 Hours

BIOM 8012 - Scientific Communications (1 Credit Hour)
BIOM 8033 - Integrated Systems Biology (6 Credit Hours)
BIOM 8060 - Introduction to Research II (4 Credit Hours)

Selectives: 4 Hours

Select four credit hours from the following courses:

BIOM 8030 - Experimental Therapeutics (2 Credit Hours)

BIOM 8080 - Neuroscience I (4 Credit Hours) (Required for Neuroscience major)

BIOM 8090 - Fundamentals of Genomic Medicine (2 Credit Hours) (Required for Genomic Medicine major)

BIOM 8215 - Fundamentals of Oncology I (2 Credit Hours)

BIOM 8230 - Biology of Proteins in Disease (2 Credit Hours)

BIOM 8240 - Introduction to Immunology and Infectious Disease (2 Credit Hours)

Summer Semester: 15 Hours

MOIM 9210 - Investigation of a Problem (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Upon entering the Molecular Oncology and Immunology major, this course must be taken every semester until admission to candidacy requirements are complete.

STAT 7070 - Biomedical Statistics (3 Credit Hours)

Electives (Optional)

Year Two and Beyond

The Doctor of Philosophy curriculum is not lock-step; students do not graduate as a class at the end of a specific semester. The average time to degree is approximately 5 years of full-time, year-round study; acceptable duration of the program is a minimum of 3 and maximum of 7 years. The number and type of advanced (2nd year and beyond) or elective courses vary, and may include courses within the Molecular Oncology and Immunology program as well as courses in other disciplines.

Before Admission to Candidacy

Fall Semester: 14 Hours

MOIM 9020 - Seminar in Molecular Oncology and Immunology (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Fall semester until dissertation requirements are complete.

MOIM 9040 - Molecular Oncology and Immunology Journal Club (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Fall and Spring semester until dissertation requirements are complete.

MOIM 9210 - Investigation of a Problem (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Upon entering the Molecular Oncology and Immunology major, this course must be taken every semester until admission to candidacy requirements are complete.

Electives (Optional)

Spring Semester: 14 Hours

MOIM 9030 - Seminars in Molecular Oncology and Immunology (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Spring semester until dissertation requirements are complete.

MOIM 9040 - Molecular Oncology and Immunology Journal Club (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Fall and Spring semester until dissertation requirements are complete.

MOIM 9210 - Investigation of a Problem (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every semester until admission to candidacy requirements are complete.

Electives (Optional)

Summer Semester: 12 Hours

MOIM 9210 - Investigation of a Problem (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every semester until admission to candidacy requirements are complete.

Electives (Optional)

After Admission to Candidacy

Fall Semester: 14 Hours

MOIM 9020 - Seminar in Molecular Oncology and Immunology (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Fall semester until dissertation requirements are complete.

MOIM 9040 - Molecular Oncology and Immunology Journal Club (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Fall and Spring semester until dissertation requirements are complete.

MOIM 9300 - Research (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Must be taken every semester after admission to candidacy until dissertation requirements are met.

Electives (Optional)

Spring Semester: 14 Hours

MOIM 9030 - Seminars in Molecular Oncology and Immunology (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Spring semester until dissertation requirements are complete.

MOIM 9040 - Molecular Oncology and Immunology Journal Club (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, this course must be taken in every Fall and Spring semester until dissertation requirements are complete.

MOIM 9300 - Research (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Must be taken every semester after admission to candidacy until dissertation requirements are met. Electives (Optional)

Summer Semester: 12 Hours

MOIM 9300 - Research (1 to 12 Credit Hours)

Standard enrollment is 12 credit hours per semester.

Must be taken every semester after admission to candidacy until dissertation requirements are met.

Electives (Optional)

Electives: 6 Hours Minimum

Select 6 credit hours from the following courses:

BCMB 8201 - Current Topics and Techniques in Molecular Biology (3 Credit Hours)

BIOM 8130 - Scientific Grant Writing (1 Credit Hour)

GNMD 8050 - Computational Methods in Genomics and Genetics (4 Credit Hours)

GNMD 8051 - Translational Genomics and Proteomics (3 Credit Hours)

GNMD 8052 - Functional Genomics and Proteomics Using Animal Models (3 Credit Hours)

MOIM 8030 - Biological Signaling (3 Credit Hours)

MOIM 8130 - Advanced Topics in Molecular and Cellular Immunology (3 Credit Hours)

MOIM 9010 - Advanced Seminar in Molecular Oncology and Immunology (1 Credit Hour)

Upon entering the Molecular Oncology and Immunology major, upper-level courses in another discipline or biomedical science major not included on the pre-approved elective listing may be taken as an elective with formal, advanced approval from mentor, program director, The Graduate School (and Office of the Registrar) per the official approval and course substitution process and form submission.

Additional Requirements

In addition to specific course requirements, students must complete additional PhD degree requirements, including annual advisory committee meetings, individual development plans (IDPs), satisfactory performance on the comprehensive examination, development and approval of a research proposal, writing and approval of the doctoral dissertation, and satisfactory performance on the final oral examination (dissertation defense). See PhD Student Guide for additional requirements and details.