

MICROBIOLOGY AND IMMUNOLOGY, MS

This one-year post baccalaureate program leading to the degree of Master of Biomedical Science in Microbiology and Immunology has been designed to prepare students for careers in biomedical sciences and to provide an in-depth educational experience to improve the probability of gaining admission to a postgraduate professional school such as medical, dental, veterinary schools or Ph.D. programs. Class size is limited to 20 students. All courses are taught within the Tulane School of Medicine by full time faculty.

Upon graduation, students

- Should have developed core knowledge in Microbiology and Immunology, and the ability to apply their knowledge to problems in these and other disciplines. (*Disciplinary and interdisciplinary knowledge*)
- Should have developed the ability to perform basic work in a Microbiology or other research laboratory. (*Professional competencies*)
- Should have developed skills that transcend disciplines and are applicable in any context, such as communications, leadership, and working in teams. (*Foundational and transferrable skills*)
- Should have developed the ability to apply the scientific method, understand the application of statistical analysis, gain experience in conducting research and other field studies, learn about and understand the importance of research responsibility and integrity, and engage in work-based learning and research in a systematic manner. (*Research*)

Requirements

Program Curriculum

| Course ID | Title | Credits |
|------------------------------|-------|---------|
| Select one of the following: | | 30 |
| Thesis Track | | |
| Non-thesis Track | | |
| Total Credit Hours | | 30 |

Students must complete a minimum of 30 credit hours from the courses listed below.

Students can take as many credits as desired.

Thesis Track

- 26 credit hours of course work during Fall and Spring semesters plus 4 credits for thesis-relevant courses.
- Complete requirements for a thesis, based on **library** research (generate a review paper).
- At least a "B" average (3.0 GPA) has to be achieved in order to graduate.

Non-thesis Track

- 30 credit hours of course work during Fall and Spring semesters.
- At least a "B" average (3.0 GPA) has to be achieved in order to graduate.

Required Courses

| Course ID | Title | Credits |
|------------------------|--------------------------------|---------|
| Fall Semester | | |
| MIIM 7500 | Graduate Microbiology | 4 |
| MIIM 7600 | Medical Immunology | 3 |
| MIIM 7550 | Microbiology Laboratory | 3 |
| MIIM 7010 | Seminar Microbiol, Immun | 1 |
| MIIM 7020 | Seminar Microbiol, Immun | 1 |
| Spring Semester | | |
| MIIM 7400 | Responsible Conduct-Biomed Rsh | 2 |
| MIIM 7020 | Seminar Microbiol, Immun | 1 |
| MIIM 7030 | Topics in Microbiology | 2 |
| Total Credit Hours | | 17 |

Electives

| Course ID | Title | Credits |
|------------------------|--------------------------------|---------|
| Fall Semester | | |
| MIIM 7210 | Special Problems | 1-5 |
| MIIM 7720 | Medical Mycology | 3 |
| MIIM 7050 | Thesis Research Design | 2 |
| GBCH 7500 | Human Medical Cellular Biochem | 5 |
| MIIM 7310 | Research | 1-10 |
| Spring Semester | | |
| MIIM 7750 | Medical Parasitology | 3 |
| MIIM 7220 | Advanced Research Methods | 1-4 |
| MIIM 7250 | Vaccine Biology | 3 |
| MIIM 7620 | Advanced Immunology | 3 |
| MIIM 7120 | Advanced Virology | 4 |
| MIIM 9970 | Master's Thesis | 1-2 |
| MIIM 7065 | Scientific Writing | 2 |
| MIIM 7320 | Research | 1-10 |
| MIIM 7100 | Clincl Cases & Underlying Mech | 2 |
| GBCH 7520 | Metabol Biochem Human Disease | 5 |