# MINOR IN MICROBIOLOGY

A minor in Microbiology will be of considerable benefit to students majoring in biological science, natural science, food science, biochemistry, some fields of engineering, and other science-related fields. The program is a good complement for graduates with an interest in food microbiology, immunology, medical microbiology and diagnostics, microbial genetics, or molecular biology. Additionally, some of the required and elective coursework overlaps with the interdisciplinary programs (IDPs) in molecular biology and food safety, and can be counted for both the minor and the IDP. Minors also complete classroom laboratories (MIP 302, which is required, and one additional elective lab from the approved departmental minor elective list).

## Requirements
## Effective Fall 2020

**Students must satisfactorily complete the total credits required for the minor. Minors and interdisciplinary minors require 12 or more upper-division (300- to 400-level) credits.**

**Additional coursework may be required due to prerequisites.**

| Code | Title | Credits |
|---|---|---|
| **Core Courses** | | |
| MIP 300 | General Microbiology | 3 |
| MIP 302 | General Microbiology Laboratory | 2 |
| MIP 342 | Immunology | 4 |
| **Selected Courses (select a minimum of 12 credits from the following lists)** | | |
| Select at least one from the following: | | 3-4 |
| MIP 351 | Medical Bacteriology | |
| MIP 420 | Medical and Molecular Virology | |
| Select at least one from the following: | | 3-4 |
| MIP 443 | Microbial Physiology | |
| MIP 450 | Microbial Genetics | |
| Select 4-6 credits not taken above, including one laboratory course, from the following: | | 4-6 |
| MIP 250 | Eukaryotic Microbiology | |
| MIP 260 | The World of Parasites | |
| MIP 334 | Food Microbiology | |
| MIP 335 | Food Microbiology Laboratory [1] | |
| MIP 343 | Immunology Laboratory [1] | |
| MIP 351 | Medical Bacteriology | |
| MIP 401 | Laboratory Research Methods in Microbiology [1] | |
| MIP 420 | Medical and Molecular Virology | |
| MIP 425 | Virology and Cell Culture Laboratory [1] | |
| MIP 432/ESS 432 | Microbial Ecology | |
| MIP 443 | Microbial Physiology | |
| MIP 450 | Microbial Genetics | |
| MIP 462/BZ 462/ BSPM 462 | Parasitology and Vector Biology [1] | |
| MIP 498 | Research | |
| **Program Total Credits:** | | **21** |

[1] Laboratory course.