## MASTER OF SCIENCE IN BIOLOGY WITH SPECIALIZATION IN MICROBIOLOGY

32-34 credit hours

The MS with Microbiology specialization is designed to provide students with solid foundation in the area of microbiology. Our

rigorous curriculum combined with the research opportunities offered by the department provides the students with the knowledge, skills, and experiences to pursue careers in the field of Microbiology.

## Curriculum

| Code                                 | Title   |     | <b>Credit Hours</b> |
|--------------------------------------|---|-----|---------------------|
| Required Courses                     |   |     | (21)                |
| BIOL 501                             | Graduate Laboratory Techniques                    |     | 2                   |
| BIOL 503                             | Virology  |     | 3                   |
| or BIOL 550                          | Bioinformatics                                    |     |                     |
| BIOL 504                             | Biochemistry                                      |     | 3                   |
| BIOL 515                             | Molecular Biology                                 |     | 3                   |
| BIOL 533                             | Advanced Graduate Laboratory Techniques           |     | 3                   |
| BIOL 542                             | Advanced Microbiology                             |     | 3                   |
| BIOL 544                             | Molecular Biology of Cells                        |     | 3                   |
| BIOL 595                             | Biology Colloquium                                |     | 1                   |
| Research Course Requirements         |   |     | (6)                 |
| Select one of the following options: |   |     | 6                   |
| Option 1                             |   |     |                     |
| BIOL 581                             | Capstone  | 3   |                     |
| Select one additional elective       |   | 3   |                     |
| Option 2                             |   |     |                     |
| BIOL 522                             | Research Techniques in the Biological Sciences I  | 6   |                     |
| & BIOL 523                           | and Research Techniques in Biological Sciences II |     |                     |
| Option 3                             |   |     |                     |
| BIOL 591                             | Research and Thesis M.S.                          | 6   |                     |
| Elective Courses                     |   |     | (5-7)               |
| Select five to seven credit hours    |   |     | 5-7                 |
| Any 500-level biology course         |   | 3   |                     |
| BIOL 410                             | Medical Microbiology                              | 3   |                     |
| BIOL 415                             | Advanced Human Genetics                           | 3   |                     |
| BIOL 426                             | Concepts of Cancer Biology                        | 3   |                     |
| BIOL 430                             | Human Physiology                                  | 3   |                     |
| BIOL 440                             | Neurobiology                                      | 3   |                     |
| BIOL 514                             | Toxicology  | 3   |                     |
| BIOL 597                             | Special Problems <sup>1</sup>                     | 1-3 |                     |
| Total Credit Hours                   |   |     | 32-34               |

Student may be approved for special problems as appropriate.

Other requirements are identical to those described previously for all M.S. students in biology.