

## SAMPLE PROGRAM OF STUDY

B.S. degree in Microbiology. **This is only a sample program;** students will work out their specific programs of study with their advisors.

| Freshman year                        | Units     |           |           |
|--------------------------------------|-----------|-----------|-----------|
|                                      | Fall      | Winter    | Spring    |
| BIOL 005A, 005LA, 005B               |           | 5         | 4         |
| CHEM 001A, 001B, 001C                | 4         | 4         | 4         |
| CHEM 011A, 011B, 011C                | 1         | 1         | 1         |
| ENGL 1A, 1B                          | 4         |           | 4         |
| Human/Soc Science                    |           |           | 4         |
| MATH 007A, 007B                      | 4         | 4         |           |
| <b>Total</b>                         | <b>13</b> | <b>14</b> | <b>17</b> |
| Sophomore year                       |           |           |           |
| STAT 100A                            |           |           | 5         |
| BIOL 005C                            | 4         |           |           |
| CHEM 008A, 008B, 008C                | 3         | 3         | 3         |
| CHEM 08LA, 08LB, 08LC                | 1         | 1         | 1         |
| Elective                             |           | 4         |           |
| Human/Soc Science                    |           | 4         |           |
| PHYS 002A, 002B, 002C                | 4         | 4         | 4         |
| PHYS 02LA, 02LB, 02LC                | 1         | 1         | 1         |
| <b>Total</b>                         | <b>13</b> | <b>17</b> | <b>14</b> |
| Junior year                          |           |           |           |
| BCH 100                              | 4         |           |           |
| Human/Soc Science                    | 4         | 4         | 4         |
| BIOL 102                             |           | 4         |           |
| MCBL 121                             |           | 4         |           |
| MCBL 121L                            |           |           | 3         |
| PHIL 009                             | 4         |           |           |
| Major elective & other requirements  |           |           | 7         |
| Elective                             | 4         | 4         |           |
| <b>Total</b>                         | <b>16</b> | <b>16</b> | <b>14</b> |
| Senior year                          |           |           |           |
| BIOL 107A                            | 4         |           |           |
| MCBL 125                             |           |           | 4         |
| Major electives & other requirements | 8         | 8         | 7         |
| MCBL 197                             | 3         | 3         | 3         |
| ENGL 1C                              |           | 4         |           |
| <b>Total</b>                         | <b>15</b> | <b>15</b> | <b>14</b> |



## ADVISING

Current course requirements are available online in the UCR General Catalog at [catalog.ucr.edu](http://catalog.ucr.edu). For help in selecting courses, and for information about policies and procedures, contact:

Professional Academic Advisor Felicia Rivas  
CNAS Undergraduate Academic Advising Center  
1223 Pierce Hall  
Phone: (951) 827-3103

For information about careers and graduate programs, contact the department at [plantpathmicro@ucr.edu](mailto:plantpathmicro@ucr.edu) or one of these faculty members:

Dr. James Borneman  
Lead Faculty Advisor  
[james.borneman@ucr.edu](mailto:james.borneman@ucr.edu)

Dr. Katherine Borkovich,  
Chair, Department of Microbiology and Plant Pathology  
[katherine.borkovich@ucr.edu](mailto:katherine.borkovich@ucr.edu)

# Undergraduate studies in Microbiology



Growing great science  
Making new discoveries  
Building great minds



# Microbiology at the University of California, Riverside

## THE FIELD

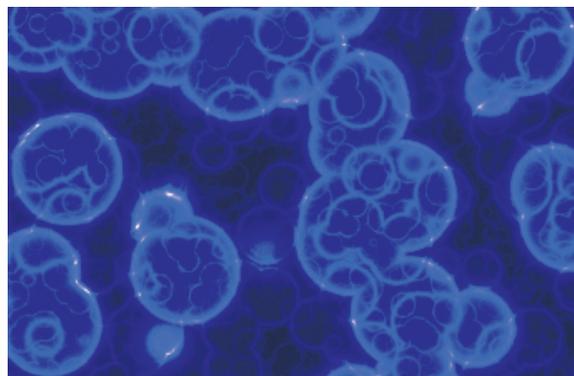
Microbiology is the study of microscopic organisms including bacteria, archaea, viruses, and fungi. Microorganisms play key roles in ecosystems and human civilization. They can both cause and prevent a wide array of diseases in humans, animals, and plants. Microbes contribute to many environmental processes, from soil formation to detoxifying polluted environments. In industry, they are key components in the manufacturing of foods such as bread and cheese, and they contain a wealth of useful compounds and enzymes for biotechnology and medicine.

## THE MAJOR

The Microbiology major is administered by the Department of Microbiology and Plant Pathology. Both B.S. and B.A. degrees are offered. The major allows students to meet requirements for a large variety of post-graduate professional programs.

## CAREER OPTIONS

Students earning a bachelor's degree in Microbiology will be prepared for a number of career options. They may continue studies in Microbiology at the graduate level, or enter professional schools in medicine, pharmacy, optometry, dentistry, physician's assistant, nursing, medical laboratory science, and veterinary medicine, among other health professions. They will also be prepared for technical careers in medicine, agriculture, biotechnology, pharmacology, forensics, patent law, and environmental fields. Finally, they will be equipped to pursue a teaching certificate in science.



For information on preparation for specific career paths, consult the UCR Career Center, the Health Professions Advising Center, the Science and Math Initiative Program, or one of the department's faculty members.

## RESEARCH OPPORTUNITIES

One of the highlights of the program in Microbiology at the undergraduate level is the capstone course, MCBL 125, Experimental Microbiology. This class guides students through the process of performing independent experimental research in a microbiology laboratory, with the goal of publishing the research results in a scientific journal. Students will acquire skills in formulating hypotheses, designing experiments, analyzing data, and preparing and presenting the results of these efforts in both written and oral form. Although this class focuses on microbiological topics, the skills students will obtain are foundational to success in many careers. Students can build upon their course experience and perform additional research projects in faculty members' laboratories.