



**Bachelor of Science
Major: Microbiology
2021-2022 Sample 4-Year Plan**

Total Degree Requirements: 120 credits

Student _____ **Student ID#** _____ **Student Phone #** _____

Advisor _____ **Minimum GPA** 2.0 in major courses **Minor/Career Interest(s)** _____

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the [Undergraduate Catalog](#).

First Year

Fall

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|---------------------------|------------------------------------|---------------------------------|---------|----------|-------|
| BIOL 119 | First Year Seminar | | 2 | F | |
| BIOL 151-1551L | General Biology I and Lab (SGR #6) | c. BIOL 151/L | 4 | F | |
| CHEM 112 | General Chemistry I | c. MATH 114 or higher placement | 3 | F/S/Su | |
| CHEM 112L | General Chemistry I Lab | | 1 | F/S/Su | |
| ENGL 101 | Composition I (SGR #1) | p. Placement | 3 | F/S/Su | |
| SGR #3 | Social Sciences/Diversity | See list in catalog | 3 | | |
| Total Credit Hours | | | 16 | | |

Spring

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|---------------------------|---------------------------------|---------------------------------|---------|----------|-------|
| BIOL 153-153L | General Biology II and Lab | | 4 | S | |
| CHEM 114 | General Chemistry II | p. CHEM 112, MATH 114 or higher | 3 | F/S/Su | |
| CHEM 114L | General Chemistry II Lab | | 1 | F/S/Su | |
| CMST 101 | Fundamentals of Speech (SGR #2) | | 3 | F/S/Su | |
| SGR #4 | Arts and Humanities/Diversity | See list in catalog | 3 | | |
| Total Credit Hours | | | 15 | | |

Summer

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|-----------------|-------------------------|------------------------|---------|----------|-------|
| | Shadowing or internship | | | | |

Second Year

Fall

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|---------------------------|-----------------------------------|---|---------|----------|-------|
| BIOL 202 | Genetics & Molecular Biology | p. BIOL 103 or 153; CHEM 114/L | 3 | F | |
| BIOL 202L | Genetics & Molecular Biology Lab | | 1 | F | |
| CHEM 326 | Organic Chemistry I | p. CHEM 114 | 3 | F | |
| CHEM 326L | Organic Chemistry I Lab | (if only want 2 sciences, wait on CHEM) | 1 | F | |
| ENGL 201 | Composition II (SGR #1) | p. ENGL 101 | 3 | F/S/Su | |
| MICR 233-233L | Introductory Microbiology and Lab | p. BIOL 151 & 6 cr. CHEM | 4 | F | |
| Total Credit Hours | | | 15 | | |

Spring

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|---------------------------|----------------------------------|------------------------|---------|----------|-------|
| BIOL 204 | Introduction to Cell Biology | p. BIOL 202/L | 3 | S | |
| BIOL 204L | Introduction to Cell Biology Lab | | 1 | S | |
| BIOL 290 | Seminar | | 1 | S | |
| CHEM 328 | Organic Chemistry II | p. CHEM 326 | 3 | S | |
| CHEM 328L | Organic Chemistry II Lab | | 1 | S | |
| SGR #3 | Social Sciences/Diversity | See list in catalog | 3 | | |
| SGR #4 | Arts and Humanities/Diversity | PHIL 220 Recommended | 3 | | |
| Total Credit Hours | | | 15 | | |



Summer

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|-----------------|----------------------------|------------------------|---------|----------|-------|
| | Research and/or internship | | | | |

Third Year

Fall

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|-----------------------------------|--|--|---------|----------|-------|
| Applied and Environ. Microbiology | BIOL 235, MICR 450, MICR 421/L, MICR 310/L, and MICR 311/L | 3-4 credits course depending | 3-4 | | |
| BIOL 383 | Bioethics | | 4 | F | |
| CHEM 464 | Biochemistry I | p. CHEM 229 or 328 | 3 | F/SU | |
| MICR 490 | Seminar | | 2 | | |
| PHYS elective | Physics elective | p. MATH 114 or higher Discuss with advisor whether PHYS 111 -113 is appropriate | 4 | | |
| Total Credit Hours | | | 16-17 | | |

Spring

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|---------------------------|---|------------------------|---------|----------|-------|
| CHEM 466 | Laboratory Methods - Biochemistry | p. CHEM 464 | 1 | F/S | |
| MICR 332 | Microbial Physiology | p. MICR 231/L or 233/L | 2 | S | |
| MICR 332L | Microbial Physiology Lab | | 2 | S | |
| STAT 281 | Introduction to Statistics | p. MATH 103 or higher | 3 | F/S/Su | |
| General Electives | Select from any discipline | | 6 | | |
| | GRE preparation if pursuing graduate school | | | | |
| Total Credit Hours | | | 14 | | |

Summer

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|-----------------|-------------------------------------|------------------------|---------|----------|-------|
| | Research and/or Internship | | | | |
| | GRE and graduate school application | | | | |

Fourth Year

Fall

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|---------------------------|--|--------------------------------------|---------|----------|-------|
| MATH | 120 or 115 or 121/L or 123 or 125 (SGR #5) | | 3-5 | | |
| MICR 438L | Techniques in Molecular Biology Laboratory | highly recommended | 2 | F | |
| MICR 439 | Medical and Veterinary Immunology | p. MICR 231 or 233 & BIOL 204 | 3 | F | |
| MICR 448 | Molecular and Microbial Genetics | p. BIOL 204 or BIOL 371 | 4 | F | |
| General Electives | Select from any discipline | Consider internship/research credits | 2 | | |
| Total Credit Hours | | | 14-16 | | |

Spring

| Prefix + Number | Course Title | Prerequisites/Comments | Credits | Semester | Grade |
|-----------------------------------|--|------------------------------|---------|----------|-------|
| Applied and Environ. Microbiology | BIOL 235, MICR 450, MICR 421/L, MICR 310/L, and MICR 311/L | 3-4 credits course depending | 3-4 | | |
| ENGL 379 | Technical Communication (BIOL/MICR section) | p. ENGL 201 | 3 | F/S | |
| Infectious Disease | MICR 424, MICR 433, and MICR 440L | | 3 | | |
| Infectious Disease | MICR 424, MICR 433, and MICR 440L | | 3 | | |
| General Electives | Select from any discipline to reach 120 total credits | | 0-2 | | |
| Total Credit Hours | | | 12-15 | | |

Comments/Notes

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the [Honors program requirements](#).