

MICROBIOLOGY

B.S.-Natural Sciences (ANS 677)

Four Year Road Map

June 2009

- This Road Map is a tool to assist you and your advisor in planning your academic career. Use it along with the Curriculum Sheet for your major, your DARS report, and the Timetable. Your specific program of study could, and probably will, look different. You need to customize the Road Map to fit your situation, and consult with your advisor about the best path for you.

Fall Semester

| Year 1 | Credits |
|---------------------------|------------|
| General Chem ¹ | 4-5 |
| Math ² | 2-5 |
| Communications A | 3 |
| Electives ³ | <u>2-3</u> |
| | 12-16 |

| Year 2 | Credits |
|---|----------|
| Chem 343 | 3 |
| Math ² | 3-6 |
| General Biology ⁴ (lecture and lab) | 5 |
| Electives ³ | <u>3</u> |
| | 14-17 |

| Year 3 | Credits |
|--|------------|
| Physics 103 or 201 or 207 ⁵ | 4-5 |
| Microbio 303 | 3 |
| Microbio 304 | 2 |
| Microbio 375 ⁸ | 1 |
| Research ⁶ | 1-4 |
| Electives | <u>2-4</u> |
| | 13-17 |

| Year 4 | Credits |
|-----------------------|------------|
| Microbio 526 | 3 |
| Microbio 527 | 2 |
| Research ⁶ | 1-4 |
| Microbio Elective | 2-3 |
| Elective | <u>2-3</u> |
| | 12-15 |

Spring Semester

| | Credits |
|---------------------------|------------|
| General Chem ¹ | 5 |
| Math ² | 3-5 |
| Electives ³ | <u>4-6</u> |
| | 12-16 |

| | Credits |
|---|------------|
| Chem 344 | 2 |
| Chem 345 | 3 |
| General Biology ⁴ (lecture and lab) | 5 |
| Electives ³ | <u>4-6</u> |
| | 14-16 |

| | Credits |
|--|------------|
| Physics 104 or 202 or 208 ⁵ | 4-5 |
| Microbio 470 | 3 |
| Biochem 501 or Bmolchem 503 ⁷ | 3 |
| Research ⁶ | 1-4 |
| Electives | <u>3-6</u> |
| | 14-16 |

| | Credits |
|-----------------------|------------|
| Microbio 450 | 2 |
| Microbio 551 | 2 |
| Research ⁶ | 1-4 |
| Microbio Electives | <u>3-6</u> |
| | 12-14 |

Notes:

- Students planning to pursue graduate studies in a biological science are encouraged to take Math 221, 222 (Calculus), Physics 201-202 or 207-208, and Biochem 507-508 (see Note 7). Chem 565 (Biophysical Chemistry) and Microbio 612 (Prokaryotic Molecular Biology) also recommended.

¹ Choose 1 of 2 sequences: Chem 103 & 104 or Chem 109. Students who take 109 and plan to attend medical or other professional schools are advised to take one additional inorganic course (Chem 311 or 327).

² Math course determined by placement scores. Microbio majors must complete Math 112 and 113 (or 114), calculus (choose from Math 171 & 217 or 211 or 221), and statistics (choose from Stat 301, 371, 541).

³ Electives- humanities, social studies, communications, ethnic studies, etc. For CALS students- international studies and economics. These can be scheduled according to the student's preference. Consult your advisor for specific requirements.

⁴ The three choices are Zoology 151-152, Zoology 101-102 and Botany 130, or Biocore. Biocore is a 3 to 4 semester sequence (301, 302, 303, 304, 323, 324, 333) (3 lectures, 2 labs required).

⁵ Physics may be taken in year 1, 2, 3, or 4 depending on the student's schedule.

⁶ Undergraduate research courses include 299, 699, 681-682 (Honors Thesis), 691-692 (Thesis). Both semesters are required for thesis credit. Students are encouraged to take several semesters of research (internship opportunities (399) are also encouraged).

⁷ If Biochem 507-508 are taken, both semesters must be completed (take 507 Fall Semester of Year 3 and 508 Spring Semester of Year 3).

⁸ Students should take Microbio 375, topic: Case Studies in Microbiology.