# Recommended Coursework Strategy for B.S. in Microbiology: 4 – year plan

**MEET WITH YOUR MICROBIOLOGY MAJOR ADVISOR EVERY SEMESTER!**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
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<tr>
<td>MATH 226</td>
<td>BIOL 230</td>
<td>BIOL 240</td>
<td>BIOL 355</td>
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<tr>
<td>Calculus I (4)</td>
<td>Gen Biol I (5)</td>
<td>Gen Biol II (5)</td>
<td>Genetics (3)</td>
</tr>
<tr>
<td>CHEM 115</td>
<td>CHEM 233</td>
<td>PHYS 111/112</td>
<td>PHYS 121/122</td>
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<tr>
<td>Gen Chem I (5)</td>
<td>Org Chem I (3)</td>
<td>Gen Physics I + lab (3+1)</td>
<td>Gen Physics II + lab (3+1)</td>
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**Electives** (11 units) may be chosen from the following list with advisor approval (*two elective courses must include lab):  
*Fall and Spring indicates when course is generally taught – check Class Schedule to confirm course offerings.*

- BIOL 391 (Microscopy & Photomicrography, 2, Spring) (prerequisite one college physics course or instructor consent)
- BIOL 420 (General Virology, 3, Fall) (prerequisites BIOL 401/402)
- BIOL 425 (Emerging Diseases, 3, Spring) (prerequisites BIOL 230 & 240, one of BIOL 355, 401, or 350 AND one of CHEM 130 or 233)
- BIOL 430 (Medical Microbiology, 3, Spring) (prerequisite BIOL 401 with a C- or better, consent of instructor)
- BIOL 431 (Medical Microbiology Lab, 2, Fall) (prerequisites BIOL 401/402 with a grade of C- or better; BIOL 430 (may be concurrent), consent of instructor)
- BIOL 435 (Immunology, 3, Fall/Spring) (prerequisites BIOL 350 OR BIOL 401)
- BIOL 436 (Immunology Lab, 2, Spring) (prerequisites BIOL 402 & concurrent enrollment in BIOL 435)
- BIOL 446 (Microbial Genomics, 4, Spring) (prerequisites BIOL 401/402 and BIOL 335 and consent of instructor, counts as a lab)
- BIOL 453 (General Parasitology 3, Fall) (prerequisites BIOL 230, 240, and 355)
- BIOL 454 (Parasitology Lab, 1, Fall) (prerequisites BIOL 453, may be taken concurrently)
- BIOL 625 (Hematology, 3, Spring) (one semester of college physiology; counts as a lab)
- BIOL 638/738 (Bioinformatics & Genome Annotation, 4, Fall) (prerequisite Biol. 230 or consent of instructor, counts as a lab)
- CHEM 336 (Organic Chemistry II Lab, 2, Fall/Spring) (prerequisite CHEM 234 with a grade of C or better, Chem 335 with a grade of C or better or concurrent enrollment)

Courses not in the electives list require PRIOR advisor approval for acceptance. For example, students may enroll in BIOL 699 (Independent Study, 1-3 units) if they wish to perform independent research. BIOL 699 requires a 3.0 GPA and development of a research project with a member of the Biology faculty.

**Notes:**

- Year 4 MATH requirement may also be chosen from: MATH 228, CSC 210, or BIOL 458. There is flexibility in which semester the 2nd Math course is taken – consult your advisor.

**Updated 9/1/2012**
PHYS 111 and 121 (or PHYS 111 and MATH 226) are prerequisites for CHEM 215/216.

This is a RECOMMENDATION only. It is designed so that two science classes are taken each semester (except in Year 4). It is certainly possible to take three science courses concurrently, if you can manage your time appropriately. Check the prerequisites of courses to see if you can take a course earlier in this scheme. For example, if you plan to take MATH 124 to satisfy the second-semester MATH requirement, you can take it during year 1 or year 2. You can also take CHEM 215/216 earlier.