Western Michigan University Biology Curriculum Guide

Pre biology requirements:

- The following courses are the prerequisites for biology, biomedical sciences, and biology-secondary education (high school level) majors;
- This major is also a good choice for students going into graduate programs and professional schools such as physician assistant, physical therapy, and medical, dental, and veterinary schools;
- A minimum of 15 credits of biology must be earned at WMU for the major;
- Only departmental courses in which a grade of “C” or better is obtained may be counted toward a major or minor in Biological Sciences.

<table>
<thead>
<tr>
<th>WMU courses</th>
<th>NCMC courses</th>
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<tbody>
<tr>
<td>CHEM 1100/1110</td>
<td>CEM 121</td>
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<tr>
<td>CHEM 1120/1130</td>
<td>CEM 122</td>
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<tr>
<td>CHEM 3750/3760</td>
<td>CEM 231</td>
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<tr>
<td>PHYS 1130/1140</td>
<td>PHY 210</td>
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<tr>
<td>PHYS 1150/1160</td>
<td>PHY 211</td>
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<tr>
<td>MATH 1220 or 2000</td>
<td>MATH 150</td>
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<tr>
<td>STAT 3660</td>
<td>STAT 200</td>
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General education requirements:

- Please see the general education program transfer guide;
- All students graduating from the College of Arts and Sciences must meet the world language proficiency by completing two semesters (6-8 hours) of the same foreign language or American Sign Language, or passing WMU’s proficiency by exam. Please contact the College of Arts and Sciences Undergraduate Advising Office at (269) 387-4366 with any questions. Neither the MACRAO Agreement nor the MTA satisfy the world language requirement.
  - If the student’s first language is not English, then the student is exempt from this requirement. Determination of eligibility for this exemption is based on whether the
student was required to take the TOEFL test for admission, and can be verified through the WMU departments of Spanish or World Language and Literatures.

- The College of Arts and Sciences also requires a critical thinking course, to be chosen from Proficiency 4c. See the general education transfer guide cited above. MACRAO or the MTA will cover this requirement.

**Important notes:**

- The chemistry, physics, and mathematics courses are called “cognate” requirements for biology department majors and are definitely required;
- The physics and chemistry courses have a minimum prerequisite of successful completion of high school advanced algebra (MATH 120 at NCMC);
- Chemistry 1100 also requires a high school chemistry course as a prerequisite (same as CEM 101 at NCMC). Students should be aware of these prerequisites while they are beginning at the community college;
- For questions about general education requirements please write the WMU College of Arts and Sciences advisors at the email address given below;
- Prior to enrolling in WMU courses, students should consult the biology department advisor below.

**Approved by:**
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