BACHELOR OF SCIENCE IN BIOLOGY (IMPACTED)
Option in Ecology Major Requirements Worksheet
2012-2013 Catalog

Name: ___________________________                      Student ID: ___________________________

Note: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to determine the appropriate sequence of courses. This checklist is to inform students of major requirements and course prerequisites only. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification. Pre-Biology majors must complete their GE Foundation courses, and the highlighted areas below all with a “C” or better and a cumulative GPA of 2.5, by 60 units to be considered for the major.

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* Must receive a “C” or better    ** See exception or clarification in the catalog

Note: See the catalog for courses that do not meet any specific or elective requirements for the major

Updated 12/10/12 LM

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course #</th>
<th>Course Title</th>
<th>Semester</th>
<th>Prerequisites (ALL Biology Department courses require a “C” or better in every pre-requisite course)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIOL 211</td>
<td>Introduction to Evolution and Diversity (4)</td>
<td></td>
<td>CHEM 111A (can also be a corequisite)</td>
</tr>
<tr>
<td></td>
<td>BIOL 212</td>
<td>Intro to Cell and Molecular Biology (4)</td>
<td></td>
<td>BIOL 211 and CHEM 111A*</td>
</tr>
<tr>
<td></td>
<td>BIOL 213</td>
<td>Introduction to Ecology and Physiology (4)</td>
<td></td>
<td>BIOL 211, 212 and CHEM 111B*</td>
</tr>
<tr>
<td></td>
<td>BIOL 260</td>
<td>Biostatistics (3)</td>
<td></td>
<td>BIOL 211 or BIOL 207 or MICR 200*, MATH 111* or 113* or 119A* or 122*</td>
</tr>
<tr>
<td></td>
<td>CHEM 111A</td>
<td>General Chemistry (5)**</td>
<td></td>
<td>A passing score on the CPT; MATH 113* or 117* or 119A* or 122*</td>
</tr>
<tr>
<td></td>
<td>CHEM 111B</td>
<td>General Chemistry (5)</td>
<td></td>
<td>CHEM 111A*</td>
</tr>
<tr>
<td></td>
<td>GEOL 102</td>
<td>General Geology (3)</td>
<td></td>
<td>Pre/corequisite: A.1 GE requirement**</td>
</tr>
</tbody>
</table>

Take ONE course from EACH block set:

- GEOL 104 Geology Laboratory (1) OR
- GEOL 105 Geology Field Laboratory (1)

- MATH 119A Survey of Calculus I (3) OR
- MATH 122 Calculus I (4)

- MATH 119B Survey of Calculus II (3) OR
- MATH 123 Calculus II (4)

- PHYS 100A General Physics (4) OR
- PHYS 151 Mechanics and Heat (4)

- PHYS 100B General Physics (4) OR
- PHYS 152 Electricity and Magnetism (4)

Upper Division (for upper division advising, see your major faculty advisor)

Take EITHER both CHEM 327 and 448, OR all four (CHEM 322A, 323A, 322B, 323B)

- CHEM 327 Fundamentals of Organic Chemistry (3)**
- CHEM 448 Fundamentals of Biological Chemistry (3)

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<table>
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<th>Course</th>
<th>Description</th>
<th>Notes</th>
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</table>
| CHEM 322A | Organic Chemistry (3) | CHEM 111B* (lab CHEM 323B required same semester**)
| CHEM 323A | Organic Chemistry Laboratory (1)** | CHEM 111B*
| CHEM 322B | Organic Chemistry (3) | CHEM 322A* and CHEM 323A* (lab required**)
| CHEM 323B | Organic Chemistry Laboratory (1)** | CHEM 322A* and CHEM 323A* |

Take ALL of the following courses:

<table>
<thead>
<tr>
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</table>
| BIOL 312 | Evolutionary Biology (3) | BIOL 211, 212, 213, 260
| BIOL 340 | Molecular Cell Biology (3) | BIOL 211, 212; CHEM 320A* or 322A* or 327*
| BIOL 345 | Comparative Animal Physiology (3) | BIOL 211, 212, 213
| BIOL 345L | Lab in Comparative Animal Physiology (1) | BIOL 345 (pre/corequisite)
| BIOL 350 | General Ecology (3)** | BIOL 211, 212, 213, 260; MATH 119A* or 122*
| BIOL 370 | General Genetics (4) | BIOL 211, 212, and either BIOL 260 or CHEM 251*
| BIOL 427 | Vascular Plant Systematics (4) | BIOL 312 or 370
| BIOL 456 | Population Ecology (3) | BIOL 350, MATH 119B* or 123*
| BIOL 480 | Seminars (1) | Taken during the semester the student is to graduate and with the consent of undergraduate advisor

Take ONE of the following courses in animal diversity

<table>
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<tr>
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<tbody>
<tr>
<td>BIOL 313</td>
<td>Invertebrate Zoology (4)</td>
</tr>
<tr>
<td>BIOL 316</td>
<td>General Entomology (4)</td>
</tr>
<tr>
<td>BIOL 324</td>
<td>Vertebrate Zoology (4)</td>
</tr>
</tbody>
</table>

Take ONE of the following courses in ecology and environmental science: BIOL 450, 451, 452, 454A, 454B, 457, 459.

Take at least one additional course in biological or geological sciences or geography totaling at least three units chosen in consultation with a faculty advisor. Ecology students are strongly encouraged to take GEOG 481 or an additional field orientated ecology, organismic or quantitative biology course. Students may use 1-3 units of BIOL 496 toward these three units but only with prior permission of the advisor for this option.

Few, if any, health-related professional schools (e.g. veterinary medicine) will accept VHEM 327. Some graduate programs with masters or doctorates in biology and/or ecology may also not accept CHEM 327. Students interested in these programs might consider taking CHEM 322A, B and 323A, B. CHEM 327 is not acceptable as a prerequisite for CHEM 441A. CHEM 327 is acceptable toward the in Minor in Chemistry.

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