**B.S. IN BIOLOGY (AOC: Integrative & Organismal Biology) — DEGREE REQUIREMENT CHECK SHEET** for students who matriculated summer 2018 through spring 2020

<table>
<thead>
<tr>
<th>Credit hours:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently enrolled in: ______ semester: ______________</td>
</tr>
<tr>
<td>Currently enrolled in: ______ semester: ______________</td>
</tr>
</tbody>
</table>

**AFTER SUCCESSFUL COMPLETION OF CURRENT ENROLLMENT, YOU NEED THE FOLLOWING:**

### IUB GENERAL EDUCATION REQUIREMENTS:

**Foundations:**

- English Composition
- Mathematical Modeling (fulfilled by major)

**Breadth of Inquiry:**

- Arts & Humanities (A&H)—6 credits; need: ______
- Social & Historical (S&H)—6 credits; need: ______
- Natural & Mathematical (N&M)–(fulfilled by major)

**World Languages & Cultures:**

- World Language—4th semester proficiency
- OR World Cultures–6 credits
- OR Approved international experience

GenEd residency complete: Yes  No  If no, you need: ______

### TOTAL HOURS REQUIREMENTS:

<table>
<thead>
<tr>
<th>Major Hours (A)</th>
<th>College Elective Hours (B)</th>
<th>Elective Outside Hours (C)*</th>
<th>Total College Hours (A+B)</th>
<th>Total Credit Hours (A+B+C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td></td>
<td>0</td>
<td>100</td>
<td>120</td>
</tr>
</tbody>
</table>

300/400-level Hours 36

IUB COLL. Res. after 60 credits 36

*Maximum of 20 Elective Outside Hours (C) allowed

IPRP: Yes  No  If yes, needed credit hours may not be accurate.

Overall College GPA of 2.000 or higher is required.

### CASE REQUIREMENTS:

- Public Oral Communication (COLL-P 155)
- English Composition
- Mathematical Modeling (fulfilled by major)
- Critical Approaches to the Arts and Sciences—must be done at IUB
- CASE A&H—2 courses; will count 2 GenEd; need: ______
- CASE S&H—2 courses; will count 2 GenEd; need: ______
- CASE N&M—fulfilled by major
- Intensive Writing (IW)—must be done at IUB inside the College
- Foreign Language (FL)—3rd semester proficiency

### BIOLOGY MAJOR REQUIREMENTS:

Major requirements must be completed with a C- or better.  ⚫ Chemistry, physics, statistics, and math requirements must be completed with a C- or better, but they do not count toward major GPA or major hours.

- 30 major hours: ______ needed
- 18 BIOL hours at 300/400 level: ______ needed
- Major GPA and concentration GPA ≥ 2.000. Major GPA: ______  Concentration GPA: ______

**BIOLOGY**

- BIOL-L 111
- BIOL-L 112
- BIOL-L 113 [ASURE: BIOL-X 150]
- BIOL-L 211 (P: L 112 and CHEM-C 117)
- BIOL-L 311
- BIOL-L 318
- Four Biology lectures (see reverse for list)
- Two Biology labs (see reverse for list)

**CHEMISTRY**

- CHEM-C 117 and CHEM-C 127
- CHEM-C 341
- CHEM-C 342
- CHEM-C 343

**PHYSICS**

- PHYS-P 201
- PHYS-P 202

**STATISTICS**

- PSY-K 300/310, SOC-S 371, SPEA-K 300, LAMP-L 316, MATH-M 365, OR STAT-S 300/303

**MATH**

- MATH-M 211 OR MATH-M 119 and M 120 OR MATH-V 119 and M 120
Biology B.S. degree with Area of Concentration: Integrative & Organismal Biology

The following must equal at least 18 credit hours to fulfill the requirement for the Area of Concentration. Two of the upper-level lectures and both of the upper-level labs must be taken on the IU Bloomington campus.

**Lecture Courses**

Complete two (2) courses from the Physiological Systems Biology list:
- BIOL-B 371 Ecological Plant Physiology (3 cr., Advanced Skills)
- BIOL-L 321 Human Immunology (3 cr.)
- BIOL-L 417 Stem Cells in Development, Disease, and Regeneration (3 cr., Advanced Skills)
- BIOL-L 423 Brain, Behavior and Evolution (3 cr., Advanced Skills)
- BIOL-P 451 Integrative Human Physiology (4 cr.)
- BIOL-Z 463 Comp. Neurobio. of Animal Behavior (3 cr., Advanced Skills)
- BIOL-Z 466 Endocrinology (3 cr., Advanced Skills)
- PHSI-P 416 Comparative Animal Physiology (3 cr.)
- PSY-P 466 Molecular and Cellular Neurobiology (3 cr.)

Complete two (2) courses from the Organism-Level Biology Lecture list:
- BIOL-B 351 Fungi (3 cr.)
- BIOL-L 376 Biology of Birds (4 cr.)
- BIOL-L 453 Sensory Ecology (3 cr., Advanced Skills)
- BIOL-M 460 Microbial Evolution (3 cr., Advanced Skills, rarely offered)
- BIOL-Z 373 Entomology (3 cr.)
- BIOL-Z 374 Invertebrate Zoology (3 cr.)
- BIOL-Z 406 Vertebrate Zoology (5 cr.)
- BIOL-Z 460 Animal Behavior (3 cr., Advanced Skills)
- BIOL-Z 476 Biology of Fishes (3 cr.)

* At least one (1) of the four required lecture classes above must be an Advanced Skills course from the Advanced Skills list:

**Advanced Skills list**
- BIOL-B 371 Ecological Plant Physiology (3 cr.)
- BIOL-L 417 Stem Cells in Development, Disease, and Regeneration (3 cr.)
- BIOL-L 423 Brain, Behavior and Evolution (3 cr.)
- BIOL-L 453 Sensory Ecology (3 cr.)
- BIOL-M 460 Microbial Evolution (3 cr., rarely offered)
- BIOL-Z 460 Animal Behavior (3 cr.)
- BIOL-Z 463 Comparative Neurobiology of Animal Behavior (3 cr.)
- BIOL-Z 466 Endocrinology (3 cr.)

**Laboratory Courses**

Complete two (2) of the following lab courses (courses must be different from those taken to fulfill the requirements shown at left):
- ABEH-A 350 Animal Behavior Laboratory (3 cr.)
- ANAT-A 464 Human Tissue Biology (4 cr.)
- BIOL-B 300 Vascular Plants (4 cr.)
- BIOL-B 352 Fungi: Laboratory (2 cr.)
- BIOL-B 364 Summer Flowering Plants (4 cr.)
- BIOL-L 376 Biology of Birds (4 cr.)
- BIOL-L 433 Tropical Biology (3 cr.)
- BIOL-P 451 Integrative Human Physiology (4 cr.)
- BIOL-S 318 Evolution, Honors (4 cr.) – **Important:** only 1 credit hour of BIOL-S 318 may count toward the Concentration Hours requirement
- BIOL-Z 373 Entomology (3 cr.)
- BIOL-Z 375 Invertebrate Zoology Laboratory (2 cr.)
- BIOL-Z 406 Vertebrate Zoology (5 cr.)
- BIOL-Z 469 Endocrinology Laboratory (2 cr.)
- PSY-P 473 Laboratory in Molecular Neuroscience (4 cr.)
- ASURE students: BIOL-X 325 ASURE Biology Research Lab 2 (3 cr.) requires approval of D.U.S. to count in this Area of Concentration

→ BIOL-L 410 Topical Issues in Biology (2–3 cr.) may be used toward the Area of Concentration, depending on the topic covered and with approval of the Director of Undergraduate Studies.

**Notes:**
- Except for the GPA requirement, a grade of C- or higher is required for a course to count toward a requirement in the concentration.
- A GPA of at least 2.000 for all courses taken in the concentration—including those where a grade lower than C- is earned—is required.
- Most courses have prerequisites. Always check the Bulletin and the Schedule of Classes for course information before taking a course.

Subplan code: INORGBICON