B.S. IN BIOLOGY (AOC: Biology of Disease) — DEGREE REQUIREMENT CHECK SHEET for students who matriculated summer 2015 through spring 2018

<table>
<thead>
<tr>
<th>Credit hours:</th>
<th>Purpose: ______________________________</th>
<th>Date: ___________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently enrolled in: _____ semester: ______________</td>
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<tr>
<td>Currently enrolled in: _____ semester: ______________</td>
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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>Required</th>
<th>Complete</th>
<th>Needed</th>
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<tbody>
<tr>
<td>30</td>
<td></td>
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| College Elective Hours (B) | | |
|-----------------|----------|----------|--------|
|                  |          |          |        |

<table>
<thead>
<tr>
<th>Elective Outside Hours (C)*</th>
<th>0</th>
<th>0</th>
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<table>
<thead>
<tr>
<th>Total College Hours (A+B)</th>
<th>100</th>
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<table>
<thead>
<tr>
<th>Total Credit Hours (A+B+C)</th>
<th>120</th>
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<tr>
<th>300/400-level Hours</th>
<th>36</th>
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<tr>
<th>IUB COLL. Res. after 60 credits</th>
<th>36</th>
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* Maximum of 20 Elective Outside Hours (C) allowed

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

Overall College GPA of 2.00 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.

- 30 BIOL hours: _____ needed
- 18 BIOL hours at IUB: _____ needed
- 18 BIOL hours at the 300/400 level: _____ needed
- Major GPA of 2.00 or higher. Major GPA: ______

<table>
<thead>
<tr>
<th>BIOLOGY</th>
<th>CHEMISTRY</th>
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<tbody>
<tr>
<td>BIOL-L 111</td>
<td>CHEM-C 117 and C 127</td>
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<tr>
<td>BIOL-L 112</td>
<td>CHEM-C 341</td>
</tr>
<tr>
<td>BIOL-L 113</td>
<td>CHEM-C 342</td>
</tr>
<tr>
<td>BIOL-L 211 (P: L 112 and CHEM-C 117)</td>
<td>CHEM-C 343</td>
</tr>
<tr>
<td>BIOL-L 311</td>
<td>PHYS-P 201</td>
</tr>
<tr>
<td>BIOL-L 318</td>
<td>PHYS-P 202</td>
</tr>
<tr>
<td>Four Biology lectures (see reverse for list)</td>
<td>PHYSICS</td>
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<td>PHYSICS</td>
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<td>STATISTICS</td>
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<td>MATH</td>
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<td>MATH</td>
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- Lecture + labs must = at least 18 credit hours

- Two Biology labs (see reverse for list)
Biology B.S. degree with Area of Concentration: Biology of Disease
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.

**Required Lecture Courses**
Complete **two** of the following lectures (6 cr.):
- BIOL-L 312 Cell Biology (3 cr.)
- BIOL-L 321 Principles of Immunology (3 cr.)
- BIOL-L 328 Disease Ecology and Evolution (3 cr.)
- BIOL-M 380 Microbiology of Infectious Disease (3 cr.)

**Elective Lecture Courses**
Complete **two** of the following lectures. **At least one lecture must be chosen from List B.** Courses must be different from those taken to fulfill requirement above.

**List A Courses**
- BIOL-B 351 Fungi (3 cr.)
- BIOL-L 312 Cell Biology (3 cr.)
- BIOL-L 321 Principles of Immunology (3 cr.)
- BIOL-L 485 Genetics, Biological Research (3 cr.)
- BIOL-L 486 Advanced Cell Biology (3 cr.)
- BIOL-L 487 Molecular Mechanisms of Development and Disease (3 cr.)
- BIOL-M 430 Virology Lecture (3 cr.)
- BIOL-P 451 Integrative Human Physiology (4 cr.)
- BIOL-Z 373 Entomology (3 cr.)
- CHEM-C 383 Human Biochemistry (3 cr.) OR CHEM-C 483 Biological Chemistry (3 cr.)
- MSCI-M 480 Molecular Biology of Cancer: Cell Signaling & Fate (3 cr.)
- MSCI-M 485 Physiology of Human Disease (4 cr.)

**List B Advanced Skills Courses**
- BIOL-L 411 Transcription, Epigenetics, and Human Disease (3 cr.)
- BIOL-L 412 Analysis of Cancer Research (3 cr.)
- BIOL-L 417 Stem Cells in Development, Disease, and Regeneration (3 cr.)
- BIOL-L 472 Microbial Ecology (3 cr.)
- BIOL-M 380 Microbiology of Infectious Disease (3 cr.)
- BIOL-M 416 Biology of AIDS (3 cr.)
- BIOL-M 440 Medical Microbiology: Lecture* (3 cr.)
- BIOL-Z 466 Endocrinology (3 cr.)

**Laboratory Courses**
Complete at least **two** of the following lab courses. These courses must be different from those taken to fulfill the requirements shown at left.
- BIOL-B 352 Fungi: Laboratory (2 cr.)
- BIOL-L 324 Human Molecular Biology Laboratory (3 cr.)
- BIOL-M 315 Microbiology Laboratory (2 cr.)
- BIOL-M 435 Viral Tissue Culture Laboratory (3 cr.)
- BIOL-M 445 Medical Microbiology: Laboratory* (3 cr.)
- BIOL-P 451 Integrative Human Physiology (4 cr.)
- BIOL-Z 373 Entomology (3 cr.)
- BIOL-Z 469 Endocrinology Laboratory (2 cr.)

* BIOL-M 440 and BIOL-M 445 have Microbiology prerequisites. For Biology B.S. students, BIOL-M 380 may substitute in place of BIOL-M 250 as a prerequisite.

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

Most courses have prerequisites. Always check the Bulletin and the Schedule of Classes for course information before taking a course.

Subplan code: BIOLDISCON