

B.S. IN BIOLOGY (AOC: Cell Biology & Molecular Genetics) – DEGREE REQUIREMENT CHECK SHEET for students who matriculated summer 2020 through spring 2022

Student Name/ID: _____

Purpose: _____

Date: _____

Credit hours:

Currently enrolled in: _____ semester: _____

Currently enrolled in: _____ semester: _____

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

IUB GENERAL EDUCATION REQUIREMENTS:

Foundations:

- English Composition (minimum grade of C required)
- 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:

	Required	Complete	Needed
Major Hours	30		
Total College Hours	100		
Total Credit Hours	120		
300-499 level Hours	36		
IUB COLL Res. after 60 Hours	36		

IPRP (in-progress repeated course): Yes No
If yes, credit hours showing as needed in your AAR may not be accurate. Ask an advisor!

College GPA of at least 2.000 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 A&H here; need: _____
- CASE S&H–2 courses; will count 2 GenEd S&H here; need: _____
- CASE N&M–4 courses; fulfilled by major
- Intensive Writing (IW)–must be done at IUB inside the College
- Foreign Language (FL)–3rd semester proficiency
- CASE Culture Studies: Diversity in U.S. course–must be done at IUB

BIOLOGY MAJOR REQUIREMENTS:

Major requirements must be completed with a C- or better. ★ Chemistry, physics, statistics, and math Addenda 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 IUB: _____ needed
- 18 BIOL hours at 300-499 level: _____ needed 15 concentration hours: _____ needed
- Major GPA and concentration GPA \geq 2.000. Major GPA: _____ Concentration GPA: _____

BIOLOGY

- BIOL-L 111
- BIOL-L 112
- BIOL-L 113 [or BIOL-X 150 or BIOT-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)
 - _____ (IUB)
 - _____ (IUB)
 - _____ (Advanced Skills)
 - _____

- Two Biology labs (see reverse for list)
 - _____ (IUB)
 - _____ (IUB)

Lectures + labs must = at least 15 credit hours

★ 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

- EAS-E 314, PSY-K 300/310, SOC-S 371, SPEA-K 300, LAMP-L 316, MATH-M 365, **OR** STAT-S 300/S 303

★ MATH

- MATH-M 211 **OR** MATH-M 119 and MATH-M 120 **OR** MATH-V 119 and MATH-M 120

Biology B.S. degree with Area of Concentration: Cell Biology & Molecular Genetics

The following must equal at least 15 credit hours. **Two** of the upper-level lectures and **both** of the upper-level labs must be taken on the IU Bloomington campus.

1. Cell Biology. One (1) course:

- BIOL-L 312 Cell Biology (3 cr.) (*fall and spring*)

2. Biochemistry. One (1) course:

- BIOT-T 440 Structure, Function, & Regulation of Biomolecules (3 cr.) (*spring*)
- CHEM-C 383 Human Biochemistry (3 cr.) (*fall and spring*)
- CHEM-C 483 Biological Chemistry (3 cr.) (*fall and spring, sometimes summer*)
- CHEM-C 484 Biomolecules and Catabolism (3 cr.) (*fall and spring*)

3. Advanced Skills Lecture. One (1) course:

- BIOL-B 371 Ecological Plant Physiology (3 cr.) (*fall*)
- BIOL-L 410 Topical Issues in Biology (**topic requires approval of D.U.S.**) (2–3 cr.) (*fall and spring*)
- BIOL-L 411 Adv. Gene Reg.: Transcription, Epigenetics, & Disease (3 cr.) (*spring*)
- BIOL-L 412 Analysis of Cancer Research (3 cr.) (*on hiatus*)
- BIOL-L 413 Translational Medicine: From Bench to Bedside (3 cr.)
- BIOL-L 417 Stem Cells in Development, Disease, Regeneration (3 cr.) (*spring*)
- BIOL-L 485 Genetics, Models of Human Disease, Research (3 cr.) (*fall*)
- BIOL-L 486 Advanced Cell Biology (3 cr., P: BIOL-L 312) (*spring*)
- BIOL-L 487 Molecular Mechanisms of Development and Disease (3 cr.) (*spring*)
- BIOL-M 416 Biology of AIDS (3 cr.) (*spring*)
- BIOL-Z 462 Genetics of Behavior (3 cr., P or C: BIOL-L 311) (*spring*)
- BIOL-Z 466 Endocrinology (3 cr.) (*variable, usually fall*)

4. Lecture Elective. One (1) course:

- Additional course from the Advanced Skills Lecture list
- BIOL-B 373 Mechanisms of Plant Development (4 cr.) (*fall*)
- BIOL-L 321 Human Immunology (3 cr.) (*spring*)
- BIOL-L 331 Introduction to Human Genetics (3 cr.) (*fall and spring*)
- BIOL-L 388 Digital Biology: A Survey of Topics in Bioinformatics and Genomics (3 cr.) (*spring*)
- BIOL-M 430 Virology Lecture (3 cr.) (*spring*)
- MSCI-M 480 Molecular Biology of Cancer: Cell Signaling & Fate (3 cr.) (*spring*)

5. Required Laboratory. One (1) course:

- BIOL-L 313 Cell Biology Laboratory (3 cr.) (*fall and spring*)
- BIOL-L 319 Genetics Laboratory (3 cr.) (*fall and spring*)

6. Elective Laboratory. One (1) course:

- Additional course from the Required Laboratory list
- ANAT-A 464 Human Tissue Biology (4 cr.) (*fall and spring*)
- BIOL-L 323 Molecular Biology Laboratory (3 cr.) (*fall*)
- BIOL-L 324 Human Molecular Biology Laboratory (3 cr.) (*spring*)
- BIOL-M 435 Viral-Tissue-Culture Laboratory (3 cr.) (P or C: BIOL-M 430) (*spring*)
- BIOL-S 211 Molecular Biology, Honors (5 cr.) – **Important:** only 1 credit hour of BIOL-S 211 may count toward Concentration Hours (*fall*)
- BIOL-X 325 ASURE Biology Research Lab 2 (3 cr., **approval of D.U.S. required**)
- BIOL-Z 469 Endocrinology Laboratory (2 cr.) (*spring*)
- BIOT-T 315 Biotechnology Laboratory (3 cr.) (*fall and spring*)
- BIOT-T 425 Lab in Macromolecular Production, Purification (3 cr.) (*fall*)
- BIOT-X 325 ASURE Biotechnology Research Lab 2 (3–4 cr.)

→ 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.

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.