B.S. IN BIOLOGY (AOC: Cell Biology & Molecular Genetics) — DEGREE REQUIREMENT CHECK SHEET for students who matriculated summer 2022 through spring 2024

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 ≥ 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/K 310, SOC-S 371, SPEA-K 300, SPH-Q 381, 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 Molec. Mech. of Develop. and Disease (3 cr.) *(spring, rarely offered)*
- BIOL-M 416 Biology of AIDS (3 cr.) *(spring, rarely offered)*
- 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.)~~ *(on hiatus)*
- 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-L 410 Topical Issues in Biology **(topic requires approval of D.U.S.)** (2–3 cr.) *(fall and 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 and spring)*
- 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, rarely offered)*
- 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.)

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: CLBIMGNCON