

B.S. IN BIOLOGY (AOC: Cell Biology & Molecular Genetics) – DEGREE REQUIREMENT CHECK SHEET for students who matriculated summer 2015 or after

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
- 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 (A)	30		
College Elective Hours (B)			
Elective Outside Hours (C)*	0		0
Total College Hours (A+B)	100		
Total Credit Hours (A+B+C)	120		
300/400-level Hours	36		
IUB COLL Res. after 60 credits	36		

* *Maximum of 20 Elective Outside Hours (C) allowed*

I PRP: 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
- 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
- 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: _____

BIOLOGY

- BIOL-L 111
- BIOL-L 112
- BIOL-L 113
- 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 18 credit hours

CHEMISTRY

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

PHYSICS

- PHYS-P 201
- PHYS-P 202

STATISTICS

- PSY-K 300/310, SPEA-K 300, LAMP-L 316 **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: Cell Biology & Molecular Genetics

The following must equal at least 18 credit hours to fulfill the requirement for the Area of Concentration.

Required Lecture Courses

- a. BIOL-L 312 Cell Biology (3 cr.)
- b. Biochemistry; choose **one** of the following options:
 - BIOT-T 440 Structure, Function, & Regulation of Biomolecules (3 cr.)
 - CHEM-C 383 Chemical Organization of Living Systems (3 cr.)
 - CHEM-C 483 Biological Chemistry (3 cr.)
 - CHEM-C 484 Biomolecules and Catabolism (3 cr.)

Elective Lecture Courses

Complete **two** of the following lectures; **at least one must be from List B:**

List A

- BIOL-L 331 Introduction to Human Genetics (3 cr.)
- BIOL-L 321 Principles of Immunology (3 cr.)
- BIOL-B 373 Mechanisms of Plant Development (4 cr.)
- BIOL-M 430 Virology Lecture (3 cr.)
- MSCI-M 480 Molecular Biology of Cancer (**Approved topic: Cell Signaling and Fate**) (3 cr.)

List B Advanced Skills

(classes that include analysis of primary scientific literature)

- BIOL-L 417 Developmental Biology (3 cr.)
- BIOL-B 371 Ecological Plant Physiology (3 cr.)
- BIOL-L 412 Analysis of Cancer Research (3 cr.)
- BIOL-L 411 Epigenetics, Chromosomes, and Disease (3 cr.)
- BIOL-M 416 Biology of AIDS (3 cr.)
- BIOL-Z 466 Endocrinology (3 cr.)

Laboratory Courses

Choose **at least one** course from Group A.

Group A:

- BIOL-L 313 Cell Biology Laboratory (3 cr.)
- BIOL-L 319 Genetics Laboratory (3 cr.)

If only one course from Group A above is taken, then choose another course from the following options:

Group B:

- BIOL-L 323 Molecular Biology Laboratory (3 cr.)
- BIOT-T 315 Biotechnology Laboratory (3 cr.)
- BIOT-T 425 Laboratory in Macromolecular Production, Purification, and Characterization (3 cr.)
- BIOL-L 324 Human Molecular Biology Laboratory (3 cr.)
- BIOL-M 435 Viral Tissue Culture Laboratory (3 cr.) *
- BIOL-Z 469 Endocrinology Laboratory (2 cr.)
- ANAT-A 464 Human Tissue Biology (4 cr.)

* BIOL-M 435 has a prerequisite of BIOL-M 430 (either prior or concurrent).

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.