



Department of Biological Sciences
College of Science, Technology, Engineering,
and Math (2025-26)

Suggested Curriculum Guide for B.S. in Biomedical Sciences Biomedical Research Concentration

Freshman (1st Semester) 17-18 hrs

GSD 101- Foundations in Learning	3
BIO 111/L- Cellular and Molecular Biology/Lab	4
⁶ CHE 111 (<i>fulfills Gen. Ed. 4</i>)- General Chemistry I	3
CHE 111L- General Chemistry I Lab	1
⁶ STA 270 <i>or</i> STA 215 (<i>fulfills Gen. Ed. 2</i>)- Applied Statistics or Into. to Statistical Reasoning	3-4
Gen. Ed. 1A (<i>ENG 101</i>)	3

Sophomore (1st Semester) 16 hrs

BIO 319- Zoology	4
CHE 361- Organic Chemistry I	3
CHE 361L- Organic Chemistry II L	1
⁶ PHY 131 <i>or</i> PHY 201 (<i>fulfills Gen. Ed. 4</i>)- College Physics I or University Physics I	5
Gen. Ed 3B course 1	3

Junior (1st Semester) 16 hrs

BIO 315- Genetics	4
BIO 331- Cell Biology	3
CHE 430 <i>or</i> 431 (Spring only)- Biochemistry of Macromolecules <i>or</i> Metabolic Biochemistry	3
PHI 383- Health & Biomedical Ethics	3
Gen. Ed. 5B (<i>PSY 200 recommended</i>)- Intro. to Psychology	3

Senior (1st Semester) 14-15 hrs

BIO 531- Principles of Molecular Biology	4
† Restricted Elective	3-4
Gen Ed. 3A (Arts)	3
Free Elective	3
Free Elective	0-2

Freshman (2nd Semester) 15 hrs

BIO 112/L- Ecology and Evolution/Lab	4
CHE 112-General Chemistry II	3
CHE 112L- General Chemistry II Lab	1
MAT 234- Calculus I	4
Gen. Ed. 1B (<i>ENG 102</i>)	3

Sophomore (2nd Semester) 15 hrs

BIO 332- Careers in Biomedical Sciences	1
BIO 320- Principles of Microbiology	4
CHE 362- Organic Chemistry II	3
CHE 362L- Organic Chemistry II Lab	1
INF 104- Computer Literacy with Software Apps.	3
Gen. Ed. 1C (<i>CMS 100 or 210</i>)	3

Junior (2nd Semester) 14 hrs

BIO 348- Vertebrate Physiology	4
CHE 432- Biochemistry Laboratory	1
† Restricted Elective	3-4
Gen. Ed 5A (<i>History</i>)	3
Free Elective	1
Free Elective	0-1

Senior (2nd Semester) 14 hrs

BIO 495- Evolution Theory and Application	1
† Restricted Elective	3-4
Gen Ed. 3B (<i>Humanities</i>) course 2	3
Gen Ed. 5B course 2	3
Free Elective	3
Free Elective	0-1

⁶ Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.

Due to variable course hour choices for MAT requirement and concentration requirements, marked free electives may also be variable. Consult with your advisor to ensure you have a minimum of 120 total credit hours for graduation

UNIVERSITY GRADUATION REQUIREMENTS

General Education
Foundations in Learning (GSD 101; waived for transfers with 30+ hrs)

39 hours
36 hours
3 hours

MAJOR REQUIREMENTS

Core Courses

BIO 111, BIO 112, BIO 315, BIO 319, BIO 320, BIO 331, BIO 332, BIO 348, BIO 495

28 hours

Concentration Requirements

BIO 531, *CHE 362, *CHE 362L, §*CHE 430 or §*CHE 431, *CHE 432, *MAT 234

25 hours

† PLUS NINE (9) HOURS selected from the following (restricted elective):

BIO 342, BIO 527, BIO 528, BIO 533, BIO 535, BIO 546, BIO 547, BIO 549, BIO 598, §* CHE 430, §* CHE 431

§ Cannot be used for credit in both concentration requirement and restricted electives categories above.

Supporting Course Requirements

⁶CHE 111, *CHE 111L, CHE 112, CHE 112L, *CHE 361, *CHE 361L, INF 104, PHI 383, ⁶* PHY 131 or ⁶* PHY 201, ⁶STA 215 or ⁶* STA 270

17-18 hours

Free Electives

10-11 hours

Total Curriculum Requirements

120 hours

