

2023-2024 Degree Map: B.S. Biochemistry/Molecular Biology
School of Natural Sciences & Mathematics | Stockton University
USC 1 – 240 | (609) 652-4546

This is a **suggested** plan of study for completion of this degree program. The **goal** of a Degree Map is to ensure that students graduate with no greater than 128 credits and in four years.

- All students should speak with their preceptor about their academic programs. Students are advised to reference their Degree Works for information about their program's At-Some-Distance and Cognate courses.
- Transfer students may not need to take all courses in the plan; they should consult with an academic advisor.

FIRST YEAR – FALL SEMESTER	
CHEM 2110/15 Chemistry I: General Principles w/lab ¹ Attribute: Q2	5 credits
BIOL 1200/05 Cells and Molecules w/lab	5 credits
MATH 2215 Calculus I Attribute: Q1	5 credits
Subject: FRST or G-course Attribute: FY Seminar Optional Attributes: W1, A, H, I, R, and/or V	4 credits
Total Course Load as of First Year Fall Semester	19 credits

FIRST YEAR – SPRING SEMESTER	
CHEM 2120/25 Chemistry II: Organic Structure w/lab ¹	5 credits
BIOL 1400/05 Biodiversity & Evolution w/lab	5 credits
Subject: FRST or G-course Attribute: A, H, I, R, and/or V	4 credits
Subject: ASD or G-course Attribute: A, H, I, R, and/or V	4 credits
First Year Credit Total Overall	37 credits

SECOND YEAR – FALL SEMESTER	
CHEM 2130 Chemistry III Organic Reactions w/lab ¹	5 credits
PHYS 2110/15 Physics for Life Science I w/lab OR PHYS 2220/25 Physics I w/lab ²	5-6 credits
BIOL 2110/15 Genetics w/lab	5 credits
Subject: G-course Attribute: A, H, I, R, and/or V	4 credits
Total Course Load as of Second Year Fall Semester	56-57 credits

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SECOND YEAR – SPRING SEMESTER	
CHEM 2140 Chemistry IV Theory & App w/lab ¹ Attribute: Q2	5 credits
PHYS 2120/25 Physics for Life Science II w/lab OR PHYS 2230/35 Physics II ³	5-6 credits
Subject: G-course Attribute: A, H, I, R, and/or V	4 credits
Subject: ASD Attribute: W, A, H, I, R, and/or V	4 credits
Second Year Credit Total Overall	74-75 credits

THIRD YEAR – FALL SEMESTER	
CHEM 3250 Biochemistry	4 credits
Advanced Chemistry/Biology Course (see list below) ³	4 credits
Subject: NAMS Cognate course	4 credits
Subject: G-course Attribute: A, H, I, R, and/or V	4 credits
Total Course Load as of Third Year Fall Semester	90-91 credits

THIRD YEAR – SPRING SEMESTER	
CHEM 3350 Biochemistry Lab Methods Attribute: Q2, W2	4 credits
Advanced Chemistry/Biology Course (see list below) ⁴	4 credits
Subject: G-course Attribute: Q2 (preferred)	4 credits
Subject: ASD Attribute: W, A, H, I, R, and/or V	4 credits
Third Year Credit Total Overall	106-107credits

FOURTH YEAR – FALL SEMESTER	
Advanced Chemistry/Biology Course (see list below) ⁴	4 credits
BCMB 4800/4900 Senior Project or Internship*	4 credits
Subject: ASD or G-course Attribute: A, H, I, R, and/or V	4 credits
Molecular Biology course (BIOL 4210, 4211, 4212, 4213, or 4215) ⁵ only one is required and this cannot count as a biology elective	4 credits
Total Course Load as of Fourth Year Fall Semester	122-123 credits

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FOURTH YEAR – SPRING SEMESTER	
Advanced Chemistry/Biology Course (see list below) ⁴	4 credits
BCMB 4800/4900 Senior Project or Internship*	4 credits
Program/cognate course	4 credits
Subject: G-course Attribute: W1/W2	4 credits
Fourth Year Credit Total Overall	138-140 credits

Program Specific Notes

- A minimum overall **2.0 GPA** is required in Program, Cognate and Elective courses. A grade of C or better is required for all core courses (shaded above).
- ¹ It is important to note at Stockton, Chemistry I and IV are 'General Chemistry' while CHEM II and CHEM III are 'Organic Chemistry', thereby students may proceed to CHEM II or CHEM IV after taking CHEM I with lab.
- ² PHYS 2220/25 requires MATH 2215 Calculus I (may be taken concurrently).
- ³ PHYS 2230/35 requires MATH 2216 Calculus II (may be taken concurrently).
- ⁴ **Advanced Chemistry Electives:** Two of the following: CHEM 3035 Survey of Instrumentation, CHEM 3110 Inorganic Chemistry, CHEM 3310 Laboratory Methods I, CHEM 3330 Food Chemistry, CHEM 3410 Physical Chemistry I, CHEM 3520 Advanced Organic Chemistry, CHEM 3550 Advanced Biochemistry. **Advanced Biology Electives:** Two of the following: BIOL 3141 Embryology, BIOL 3160 Developmental Biology, BIOL 3170 Microbiology w/lab, BIOL 3180 Plant Physiology, BIOL 3186 Histology, BIOL 3190 Cell Biology & Biophysics, BIOL 3360 Neurobiology, BIOL 4100 Principles of Evolution, BIOL 4110 Bioinformatics, BIOL 4210 Molecular Genetics, BIOL 4211 Molecular Evolution, BIOL 4212 Molecular Microbiology, BIOL 4213 Eukaryotic Molecular Biology, BIOL 4215 Biotechnology, BIOL 4236 Systems Biology, BIOL 4321 Cancer Biology or other approved courses. These courses cannot fulfill both this requirement and the Molecular Biology elective requirement.
- ⁵ **Molecular Biology Course Electives:** Either BIOL 4210 Molecular Genetics, BIOL 4211 Molecular Evolution, BIOL 4212 Molecular Microbiology, BIOL 4213 Eukaryotic Molecular Biology, BIOL 4215 Biotechnology. This requirement cannot also fulfill the Advanced Biology Elective requirement.
- *Senior Project or Senior Internship may also have BIOL or CHEM program designation with approval of preceptor.