

BACHELOR OF SCIENCE (B.S.) DEGREE IN BIOCHEMISTRY

A total of 120 units must be completed with at least a 2.0 grade point average in all college work attempted, all units attempted at CSUN and all upper division units in the major. Students who do not pass the Mathematics Placement Test or Chemistry Placement Test may need to take preparatory courses such as Math 102/104 (or Math 105) and Chem 100. **Students interested in physical biochemistry should be in the B.S. Chemistry program. This program will provide additional math, physics and physical chemistry topics essential for physical biochemistry.**

SUGGESTED FIVE-YEAR SEQUENCE OF REQUIRED COURSES FOR B.S. BIOCHEMISTRY MAJORS

Fall Semester	Units		Spring Semester	Units
FIRST YEAR				
Biol 106 & 106L (Biological Principles I)	4		Biol 107 & 107L (Biological Principles II)	4
Math 255A (Calculus I)	3		Math 255B (Calculus II)	3
General Education ¹	6		General Education ¹	6
	13			13
SECOND YEAR				
Chem 101 & 101L (General Chemistry I)	5		Chem 102 & 102L (General Chemistry II)	5
Phys 100A & AL (General Physics I)	4		Phys 100B & BL (General Physics II)	4
General Education ¹	6		General Education ¹	6
	15			15
THIRD YEAR				
Chem 321 & 321L (Chemical Analysis I)	4		Chem 334 & 334L (Principles of Organic Chemistry II)	4
Chem 333 & 333L (Principles of Organic Chemistry I)	4		Chem 334R	1
Chem 333R	1		Biol 380 (Cell Biology)	3
General Education ¹	4		General Education ¹	6
	13			14
FOURTH YEAR				
Chem 461 (Biochemistry I) (Fall Only)	4		Chem 462 (Biochemistry II) (Spring Only)	4
Chem 355 (Fund. of Physical Chemistry) (Fall Only)	3		Chem 422 & 422L (Chemical Analysis II)	4
Chem 355L (Exp. Physical Chemistry) (Fall Only)	1		General Education ¹	4
General Education ¹	4			
	12			12
FIFTH YEAR				
Chem 465 (Topics in Biochemistry)	3		Chem 401 (Inorganic Chemistry)	3
Chemistry Elective	3		Biology Elective	4
Biology Elective	3		General Education ¹	4
General Education ¹	3			
	12			11

¹General Education units must include 6 units of American History and Government if CSUN work is used to satisfy Title V requirements.

GENERAL EDUCATION REQUIREMENTS FOR B.S. BIOCHEMISTRY MAJORS

The following may be used as a guide and worksheet to select courses to satisfy G.E. requirements. Consult your advisor and the G.E. section of the CSUN catalog before selecting courses. Enter your course selections in the spaces provided. Chemistry courses may not be used by chemistry majors to satisfy G.E. requirements. Science and Mathematics courses which do satisfy G.E. requirements for the B.S. Biochemistry program have been inserted in the appropriate spaces below.

Nine units of G.E. requirements must be upper division selected from two different section (A through F). Title V requirements (6 units) must be satisfied in addition to these requirements.

SECTION A: BASIC SUBJECTS (12 units / 3 units minimum from each subsection)	
A-1	
A-2	
A-3	Math 255A
A-4	
SECTION D: SOCIAL SCIENCES (6 units)	
6 units from at least 2 disciplines	

SECTION B: NATURAL SCIENCE (8 units)	
B-1	Physics 100A/L & 100B
B-2	
SECTION E: APPLIED ARTS AND SCIENCES (3 units)	
3 units from at least 2 disciplines	

SECTION C: HUMANITIES (6 units / 3 units minimum from each subsection)	
C-1	
C-2	
C-3	
SECTION F: COMPARATIVE CULTURAL STUDIES (6 units / 3 units minimum from each subsection)	
F-1	
F-2	
F-3	