

CHEMISTRY/BIOCHEMISTRY



Bachelor of Science (BS)

Major: Chemistry/Biochemistry

Option: Biochemistry

This program is recommended for students planning to go directly into professional fields of biochemistry, for students planning to attend graduate school in biochemistry, molecular biology or pharmacology, and for students planning to enter professional schools such as medicine, veterinary science or pharmacy.

DEGREE REQUIREMENTS

Option: Biochemistry – 119-121 credits

Required Courses: 69-71 credits

- CHEM 151 General Chemistry (5)
- CHEM 152 General Chemistry (5)
- CHEM 153 General Chemistry (5)
- CHEM 304 Quantitative Analysis (6)
- CHEM 351 Organic Chemistry (4)
- CHEM 352 Organic Chemistry (4)
- CHEM 353 Organic Chemistry (3)
- CHEM 372 Organic Chemistry Lab I (3)
- CHEM 421 Physical Chemistry (4)
- CHEM 422 Physical Chemistry (3)
- CHEM 423 Physical Chemistry (3)
- CHEM 431 Physical Chemistry Lab (1)
- CHEM 480 Biochemistry (5)
- CHEM 481 Intermediary Metabolism (5)
- CHEM 482 Integrated Topics in Biochemistry and Biophysics (3)
- CHEM 483 Biochemistry Lab (2)
- CHEM 491 Senior Thesis (4-6)

Select one of the following four courses: 4 credits

- CHEM 395 Internships (Var)
- CHEM 454 Clinical Chemistry (4)
- CHEM 498 Seminar (Var)
- CHEM 499 Directed Study (Var)

Required Supporting Courses: 50 credits

- BIOL 171 Biology I (4)
- BIOL 172 Biology II (4)
- BIOL 173 Biology III (4)
- BIOL 270 Biological Investigation (3)
- BIOL 301 Microbiology (5)
- MATH 161 Calculus I (5)
- MATH 162 Calculus II (5)
- MATH 163 Calculus III (5)
- PHYS 151 General Physics I (4)
- PHYS 152 General Physics II (4)
- PHYS 153 General Physics III (4)
- PHYS 161 Mechanics Lab (1)
- PHYS 162 Heat & Optics Lab (1)
- PHYS 163 Instrumentation Lab I (1)

Suggested supporting course: (5 credits)

Completion of a Computer programming course is strongly recommended.
(See your Chemistry/Biochemistry advisor.)

Revised 10/26/09

B.S. in CHEMISTRY/BIOCHEMISTRY

Biochemistry option: 119-121 credits

NOTICE: This program requires a strong preparation in high school mathematics, chemistry and physics. GEGR = General Education Core Requirement. This schedule is based on the 2009-2010 EWU Undergraduate Catalog. Courses are planned to be offered in the quarters shown, but scheduling is not guaranteed.

FIRST YEAR	F	W	S	
CHEM 151, 152, 153-= 1 GEGR	5	5	5	
ENGL 201 - satisfies university writing requirement		5		
MATH 161, 162, 163- satisfies mathematics proficiency requirement	5	5	5	
GEGR (two)	5		5	
CPLA 101	1			
Total Credits	16	15	15	46
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SECOND YEAR				
PHYS 151, 152, 153-(151,152,&161,162) = 2 GEGRs	4	4	4	
PHYS 161, 162, 163	1	1	1	
CHEM 351, 352, 353	4	4	3	
CHEM 372			3	
CHEM 304	6			
GEGR (one)			5	
CSCD 230 or 255 (suggested, not required)		5		
Total Credits	15	14	16	45
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THIRD YEAR				
CHEM 421, 422, 423	4	3	3	
CHEM 431	1			
BIOL 171, 172, 173	4	4	4	
BIOL 270			3	
GEGR (two)	5		5	
Electives		8		
Total Credits	14	15	15	44
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FOURTH YEAR				
CHEM 480, 481,482	5	5	3	
CHEM 483			2	
One of CHEM 395, 454, 498, 499		4		
Cultural Diversity & International Studies	4	4		
CHEM 491 Senior Thesis			4-6	
BIOL 301	5			
Electives		4	5	
Total Credits	14	17	14-16	45-47