

Bachelor of Science in Chemistry and Education with Endorsement in Secondary Education and Physical Sciences			
MAJOR REQUIREMENTS/CHEMISTRY: 36 Credits (a)		MAJOR REQUIREMENTS/EDUCATION: 24 Credits (b)	
CE-111: General Chemistry I	3.0		
CE-111L: General Chemistry I Lab	1.0		
CE-112: General Chemistry II	3.0	ED-250: Psychological & Philosophical Foundations of Education	3.0
CE-112L: General Chemistry II Lab	1.0		
CE-221: Analytical Chemistry I	3.0	EDS-330: Foundations of Special Education: Development Across the Life Span	3.0
CE-221L: Analytical Chemistry I Lab	1.0		
CE-241: Organic Chemistry I	3.0	EDS-336: Classroom Management	3.0
CE-241L: Organic Chemistry I Lab	2.0		
CE-242: Organic Chemistry II	3.0	ED-319: Content Literacy	3.0
CE-242L: Organic Chemistry II Lab	2.0		
CE-311: Chemical Literature	1.0	ED-320: Teaching Students with Diverse Needs	3.0
CE-322: Analytical Chemistry II	3.0		
CE-322L: Analytical Chemistry II Lab	2.0		
CE-341: Physical Chemistry I	3.0	<b>9 Credits as Follows (c):</b>	
CE-341L: Physical Chemistry I Lab	1.0	ED-416: Clinical Practice <b>AND</b>	8.0
CE-410: Seminar	1.0	ED-416S: Seminar in Clinical Practice	1.0
<b>Take 3 Credits of Chemistry (CE) 400+ level</b>	3.0		
CE-4xx: <u>(Excluding CE499)</u>			
INTERDISCIPLINARY REQUIREMENTS/CHEM: 24 Credits		EDUCATION METHODS REQUIREMENTS: 6 Credits	
MA-125: Calculus with Analytic Geometry I	4.0	ED-369: Methods of Teaching Science for the Secondary Teacher Part I	3.0
MA-126: Calculus with Analytic Geometry II	4.0		
PH-211: General Physics and Calculus I	4.0		
PH-211L: General Physics w/Calculus I Lab	1.0		
PH-212: General Physics w/Calculus II	4.0	ED-370: Methods of Teaching Science for the Secondary Teacher Part II	3.0
PH-212L: General Physics w/Calculus II Lab	1.0		
PH-301: Modern Physics*	3.0		
PH-302: Theoretical Physics*	3.0		
*Offered in alternative years; care in scheduling is required			
FREE ELECTIVES: 2 Credits			Credits
			2.0
(a) Students desiring certification by the ACS should enroll in the CE.ACS.BS program (b) Minimum grade of "C" required for Education Courses (c) Students must complete the appropriate test requirement(s) with a passing score PRIOR to Clinical Practice.			

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GENERAL EDUCATION REQUIREMENTS: 36 Credits		Credits
First Year Seminar	FY-101: First Year Seminar *(Select Section "CE")	3.0
Reading and Writing	EN-101: College Composition I	3.0
	EN-102: College Composition II	3.0
Mathematics	Fulfilled in Interdisciplinary w/MA-125 or MA-126	0.0
Natural Sciences	Fulfilled in Major Requirements with required CE courses	0.0
Literature	3 Credits from courses designated with Course*Type: LIT	3.0
Aesthetics and Creativity	3 Credits from Art, Music, Theatre, or Dance	3.0
Technological Literacy	IT-102: Information Technology for Scientists	3.0
Reasoned Oral Discourse	Fulfilled in the Major Requirements with ED-320	0.0
Historical Perspective	3 Credits from courses designated with Course*Type: HS.SV	3.0
Social Science	3 Credits from courses designated with Course*Type: SS.SV	3.0
Historical Perspective/Social Sciences	3 Credits from courses designated with Course*Type: HS.SV	3.0
	or 3 Credits from courses designated with Course*Type: SS.SV	
Interdisciplinary Perspectives	3 Credits from courses designated with Course*Type: ISP	3.0
Cultural Diversity and Global Understanding or Foreign Language	3 Credits from courses designated with Course*Type: CD	6.0
	and 3 Credits from courses designated with Course*Type: GU	
	or 6 Credits from the SAME foreign language	
Experiential Education	One course designated with Course*Type: EX	0.0
Writing Intensive	Two courses from Chemistry (CE) designated with Course*Type: WT	0.0
		0.0
	Two courses from Education (ED, EDL, EDS) designated with Course*Type: WT	0.0
		0.0

**Minimum Credits for a Bachelor of Science in Chemistry and Education with Endorsement in Secondary Education and Physical Sciences = 128.0**

**ADDITIONAL ENDORSEMENTS AVAILABLE:**  
 • TSD - Teacher of Students with Disabilities - Secondary    • ESL - English as a Second Language - Secondary

**NOTES:**

\* 58 credits must be completed at the 200 level or higher.

\*\* Education majors are required to have an overall GPA of 3.00 for State Certification.

\*\*\*By state regulation, all Education Majors seeking content area endorsement must complete 30 content credits (12+ credits at the 300+ level).