

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	ED-250: Foundations of Teaching and Learning	3.0
CE-112: General Chemistry II	3.0		
CE-112L: General Chemistry II Lab	1.0	EDL-201: Educational Psychology	3.0
CE-221: Quantitative Analysis	3.0		
CE-221L: Quantitative Analysis Lab	2.0	EDL-206: Child and Adolescent Development	3.0
CE-241: Organic Chemistry I	3.0		
CE-241L: Organic Chemistry I Lab	2.0	ED-319: Content Literacy	3.0
CE-242: Organic Chemistry II	3.0		
CE-242L: Organic Chemistry II Lab	2.0	ED-320: Teaching Students with Diverse Needs	3.0
CE-311: Chemical Literature	1.0		
CE-322: Instrumental Analysis	3.0		
CE-322L: Instrumental Analysis Lab	1.0		
CE-341: Physical Chemistry I	3.0	9 Credits as Follows (c):	
CE-341L: Physical Chemistry I Lab	1.0	ED-416: Clinical Practice AND	8.0
CE-410: Seminar	1.0	ED-416S: Seminar in Clinical Practice	1.0
Take 3 Credits of Chemistry (CE) 400+ level	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	ED-370: Methods of Teaching Science for the Secondary Teacher Part II	3.0
PH-212: General Physics w/Calculus II	4.0		
PH-212L: General Physics w/Calculus II Lab	1.0		
PH-301: Modern Physics*	3.0		
PH-302: Theoretical Physics*	3.0		
<i>*Offered in alternative years; care in scheduling is required</i>			
FREE ELECTIVES: 2 Credits			Credits
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(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.			

Bachelor of Science in Chemistry and Education with Endorsement in Secondary Education and Physical Sciences		
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

<p>Minimum Credits for a Bachelor of Science in Chemistry and Education with Endorsement in Secondary Education and Physical Sciences = 128.0</p> <p>ADDITIONAL ENDORSEMENTS AVAILABLE:</p> <p>• TSD - Teacher of Students with Disabilities - Secondary • ESL - English as a Second Language - Secondary</p>
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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).