

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)

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| 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: Quantitative Analysis | 3.0 | EDS-330: Foundations of Special Education: Development Across the Life Span | 3.0 |
| CE-221L: Quantitative Analysis Lab | 2.0 | | |
| 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: 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

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| 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 | | |

*Offered in alternative years; care in scheduling is required

FREE ELECTIVES: 2 Credits Credits

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| _____ | | 2.0 |
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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.

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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 |

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| <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).