

CHEMISTRY COMPREHENSIVE MAJOR: SECONDARY LICENSURE EMPHASIS

Program Requirements

Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to the advisor in their major as soon as possible. A minimum of 67 credits is required including the 26-credit Chemistry Nucleus, the requirements for the Secondary Licensure Program (described under Education):

Code	Title	Credits
Chemistry Nucleus		
CHEM 111	General Chemistry I (GT-SC2)	3
CHEM 112	General Chemistry Laboratory I (GT-SC1)	1
CHEM 113	General Chemistry II	3
CHEM 114	General Chemistry Laboratory II	1
CHEM 302	Chemical Information Literacy and Communication	3
CHEM 306	Analytical Chemistry (with laboratory)	4
CHEM 331	Organic Chemistry I	3
CHEM 332	Organic Chemistry II	3
CHEM 334	Organic Chemistry Laboratory I	1
CHEM 335	Organic Chemistry Laboratory II	1
CHEM 451	Physical Chemistry I	3
Total Credits		26

And the following:

Code	Title	Credits
BIOL 150	Biological Principles (with laboratory) (GT-SC1)	4
BIOL 151	Diversity and Patterns of Life (with laboratory)	4
BIOL 301	GENERAL ECOLOGY	3
GEOL 101	Physical Geology (GT-SC2)	3
GEOL 105	Physical Geology Laboratory (GT-SC1)	1
GEOL 201	Historical Geology (with laboratory)	4
MATH 151	Calculus I (GT-MA1)	4
MATH 251	Calculus II	4
PHYS 110	Introductory Astronomy (GT-SC2)	3
PHYS 120	Meteorology (GT-SC2)	3
PHYS 190 & PHYS 185	General Physics I (GT-SC2) and Laboratory Physics I (GT-SC1)	4
PHYS 191 & PHYS 186	General Physics II (GT-SC2) and Laboratory Physics II (GT-SC1)	4
Total Credits		41

Course	Title	Credits
Year One		
Fall		
CHEM 111	General Chemistry I (GT-SC2)	3
CHEM 112	General Chemistry Laboratory I (GT-SC1)	1
ENG 102	Writing and Rhetoric I (GT-C01)	3
MATH 140	College Algebra (GT-MA1)	3
HWTR 100	First Year Seminar	1
Social Science GE		3

Arts & Humanities GE		3
Credits		17
Spring		
Arts & Humanities GE		3
CHEM 113	General Chemistry II	3
CHEM 114	General Chemistry Laboratory II	1
ENG 103	Writing and Rhetoric II (GT-C02)	3
MATH 141	Precalculus (GT-MA1)	4
Social Science GE		3
Credits		17
Year Two		
Fall		
BIOL 150	Biological Principles (with laboratory) (GT-SC1)	4
CHEM 306	Analytical Chemistry (with laboratory)	4
CHEM 331	Organic Chemistry I	3
CHEM 334	Organic Chemistry Laboratory I	1
MATH 151	Calculus I (GT-MA1)	4
Credits		16
Spring		
BIOL 151	Diversity and Patterns of Life (with laboratory)	4
CHEM 302	Chemical Information Literacy and Communication	3
CHEM 332	Organic Chemistry II	3
CHEM 335	Organic Chemistry Laboratory II	1
MATH 251	Calculus II	4
Social Science GE		3
Credits		18
Year Three		
Fall		
BIOL 301	GENERAL ECOLOGY	3
CHEM 451	Physical Chemistry I	3
GEOL 101	Physical Geology (GT-SC2)	3
GEOL 105	Physical Geology Laboratory (GT-SC1)	1
PHYS 120	Meteorology (GT-SC2)	3
PHYS 190	General Physics I (GT-SC2)	3
PHYS 185	Laboratory Physics I (GT-SC1)	1
Credits		17
Spring		
EDUC 000	Education Gateway Course	0
EDUC 340	Application of Pedagogy and Practice	3
GEOL 201	Historical Geology (with laboratory)	4
PHYS 110	Introductory Astronomy (GT-SC2)	3
PHYS 191	General Physics II (GT-SC2)	3
PHYS 186	Laboratory Physics II (GT-SC1)	1
Credits		14
Year Four		
Fall		
EDUC 403	INSTRN&ASMT IN CONTENT AREA	3
EDUC 404	Creating Positive Learning Environments	3
EDUC 405	Data-driven Instructional Practices	3
EDUC 409	Secondary Student Teaching	3
EDUC 424	Differentiation: Applying Learner-Centered Instruction	3
Credits		15
Spring		
EDUC 406	Content Area Literacy	3
EDUC 407	Maximizing Learning through 21st Century Skills	3
EDUC 409	Secondary Student Teaching	3
EDUC 429	Teaching English Learners for Secondary and K-12 Teachers	3
Credits		12
Total Credits		126