



Chemistry Education

About this Composite Major

The Chemistry Education major is designed to prepare you for teaching in junior and senior high schools. A Bachelor of Science in Education with a Chemistry major plus 12 semester hours in each of the other sciences (biology, earth and environmental science, and physics) will qualify you to teach those secondary science courses. Other opportunities, not part of any regular program, exist on campus and provide sound practical experience, such as student assistantships and participation in the campus-tutoring program.

As a Chemistry Education major you are placed into schools for a series of field experiences including Introduction to Education (40 hours); Practicum (80 hours); Culturally Diverse Practicum (25 hours involving 3 consecutive full days in a classroom), and a 12-week student teaching field experience. Student teaching is the culminating experience of the program and the opportunity for students to apply all they have learned.

Meet a Student



VCSU is where I found my place, my role and myself. My passion for teaching science was well received and positively influenced by my peers and professors. I'm sure every student here can say the same, that their passions for what they love and are interested in has been supported while attending VCSU. I transferred to VCSU my sophomore year. I remember visiting the chemistry lab on campus and thinking "you're telling me I can be in here working with these things?" Not only have I had many opportunities to learn from amazing professors, but I have also been able to teach and tutor chemistry, physics and STEM students. - Lindsey Kiecker, Jamestown, N.D.

Meet a Graduate

"I was drawn to the excitement and energy the faculty and my fellow Chemistry Ed major students brought to the university. The program challenged me and brought out the best of me as a student and person. We were able to compete and grow as friends inside the classroom/laboratory and outside of it. I made connections I will have the rest of my life." —Jarvis Knudson '15, Kulm, N.D.

Accreditations

- [Council for the Accreditation of Educator Preparation \(CAEP\)](#)

Get Involved in your Major

- [Kappa Delta Pi \(KDP\)](#)
- [Student North Dakota United \(SNDU\)](#)

Practical Experience

The Rhoades Science Center includes a greenhouse for work in biology and botany, a planetarium and laboratories for biology, chemistry, earth science, physics, computer science, and photography studies.

On campus, the Rhoades Science Center includes a greenhouse for work in biology and botany, a planetarium and laboratories for biology, chemistry, earth science, physics, computer science, and photography studies. Students have access to:

- Infrared spectroscopy, Molecular spectroscopy
- Potentiometry, Refractometry and Polarimetry
- Organic structure software
- Excel data analysis
- Fully equipped Aquatic Macroinvertebrate Laboratory and Biomedical Research Laboratory

4,285 jobs

open every year in the upper Midwest in chemistry education



\$52,700 annually

median salary for a job in the field of chemistry education

Teacher Education Requirements

Students are typically admitted into Teacher Education during their sophomore year or beginning of their junior year



of college. This program requires a minimum cumulative GPA of 2.75 or higher and successful completion of the Praxis I test. Additional criteria for Admission to Teacher Education can be found at the following website: www.onestop.vcsu.edu (<https://onestop.vcsu.edu/support/solutions/articles/10000052001-teacher-education/>).

Contact Information

Department Chair

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Faculty Contact

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Department Location

Rhoades Science Center 203

Schedule your visit today!

<http://visit.vcsu.edu/>, (701) 845-7101 or (800) 532-8641

Plan of Study

Fall start - even years

First Year			
Fall	Credits Spring		Credits
Art and Music (Gen Ed)	3	CHEM 122	5
CHEM 121	5	CHEM 395	1
CIS 170 (Gen Ed)	3	COMM 110 (Gen Ed)	3
ENGL 110 (Gen Ed)	3	ENGL 120 (Gen Ed)	3
UNIV 150	1	HPER 100 (Gen Ed)	2
		Social Science (Gen Ed)	3
	15		17
Second Year			
Fall	Credits Spring		Credits
CHEM 330	4	CHEM 331	4
EDUC 250	3	BIOL 150 or 151	4
GEOL 100	4	MATH 165 (Gen Ed)	4
PHYS 211 (Gen Ed)	4	PHYS 212 (Gen Ed)	4
PSYC 111 (Gen Ed)	3		
	18		16
Third Year			
Fall	Credits Spring		Credits
Additional Humanities or Social Science (Gen Ed)	2	BIOL 440	4
CHEM 341	5	CHEM 342	5
CHEM 411	4	EDUC 283	3
EDUC 300	2	EDUC 352	1
EDUC 450	2	EDUC 240	3

EDUC 351	1	PSYC 250	3
	16		19
Fourth Year			
Fall	Credits Spring		Credits
CHEM 360	4	EDUC 480	10
CHEM 491	2		
EDUC 375	2		
EDUC 400	2		
CHEM 490	3		
Literacies (Gen Ed)	3		
	16		10

Total Credits 127

Fall start - odd years

First Year			
Fall	Credits Spring		Credits
Art and Music (Gen Ed)	3	CHEM 122	5
CHEM 121	5	CHEM 395	1
CIS 170 (Gen Ed)	3	COMM 110 (Gen Ed)	3
ENGL 110 (Gen Ed)	3	ENGL 120 (Gen Ed)	3
UNIV 150	1	HPER 100 (Gen Ed)	2
		Social Science (Gen Ed)	3
	15		17
Second Year			
Fall	Credits Spring		Credits
CHEM 341	5	BIOL 150 or 151	4
EDUC 250	3	CHEM 342	5
GEOL 100	4	PHYS 212 (Gen Ed)	4
PHYS 211 (Gen Ed)	4	PSYC 250	3
PSYC 111 (Gen Ed)	3		
	19		16
Third Year			
Fall	Credits Spring		Credits
Additional Humanities or Social Science (Gen Ed)	2	BIOL 440	4
CHEM 330	4	CHEM 330	4
CHEM 360	4	EDUC 240	3
EDUC 300	2	EDUC 283	3
EDUC 450	2	EDUC 352 or 464	1-2
EDUC 351	1	MATH 165 (Gen Ed)	4
	15		19-20
Fourth Year			
Fall	Credits Spring		Credits
CHEM 411	4	EDUC 480	10
CHEM 491	2		
EDUC 375	2		
EDUC 400	2		



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CHEM 490	3	
Literacies (Gen Ed)	3	
	16	10

Total Credits 127-128

Please note: This plan is intended for general information only. Students are strongly encouraged to meet with their academic advisor each semester before registration.

Learning Outcomes

1. Demonstrate a fundamental knowledge of the major concepts in chemistry.
2. Exhibit critical thinking skills by applying the scientific method to solve problems.
3. Exhibit the ability to read and communicate in a scientific style.
4. Exhibit the ability to collaborate
5. Understand the importance of chemistry to themselves and society.