Chemistry Education

Department Information

- **Department Web Site:**
  www.ndsu.edu/education/ (http://www.ndsu.edu/education/)
- **Credential Offered:**
  B.S.; B.A.
- **Sample Program Guide:**
  catalog.ndsu.edu/programs-study/undergraduate/chemistry-education/#planofstudytext (http://catalog.ndsu.edu/programs-study/undergraduate/chemistry-education/#planofstudytext)

Major Requirements

Major: Chemistry Education

Degree Type: B.A. or B.S.
Minimum Degree Credits to Graduate: 136

University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specified by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 30 credits must be NDSU resident credits. Resident credits include credits registered and paid for at NDSU.
6. At least 36 credits presented for graduation must be in courses numbered 300 or higher.
7. Students presenting transfer credit must meet the NDSU residence credits and the minimum upper level credit. Of the 30 credits earned in residence, a minimum of 15 semester credits must be in courses numbered 300 or above, and 15 semester credits must be in the student's curricula for their declared major.

For complete information, please refer to the Degree and Graduation Requirements (http://catalog.ndsu.edu/past-bulletin-archive/2024-25/academic-policies/undergraduate-policies/degree-and-graduation/) section of this Bulletin.

University General Education Requirements

A list of university approved general education courses and administrative policies are available here (http://catalog.ndsu.edu/past-bulletin-archive/2024-25/academic-policies/undergraduate-policies/general-education/#genedcoursestext).

Code	Title	Credits
Category C: Communication		**12**
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing †		
Category R: Quantitative Reasoning †		**3**
Category S: Science and Technology †		**10**
Category A: Humanities and Fine Arts †		**6**
Category B: Social and Behavioral Sciences †		**6**
Category W: Wellness †		**2**
Category D: Cultural Diversity *†		
Category G: Global Perspectives *†		
Total Credits		**39**

*
Courses for category D & G are satisfied by completing D & G designated courses in another general education category.

†
General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.

major Requirements

Code	Title	Credits
Teaching Specialty Requirements		
BIOC 260	Elements of Biochemistry	4
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	4
Pick an introductory chemistry sequence		8
Sequence A:		
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	
Sequence B:		
CHEM 150 & CHEM 160	Principles of Chemistry I and Principles of Chemistry Laboratory I	
CHEM 151 & CHEM 161	Principles of Chemistry II and Principles of Chemistry Laboratory II	
CHEM 341 & 341L	Organic Chemistry I and Organic Chemistry I Laboratory	4
CHEM 342 & 342L	Organic Chemistry II and Organic Chemistry II Laboratory	4
CHEM 425	Inorganic Chemistry I	3
CHEM 431 & 431L	Analytical Chemistry I and Analytical Chemistry I Laboratory	5
CHEM 465	Survey of Physical Chemistry	4
ENGL 324	Writing in the Sciences	3
MATH 165	Calculus I	4
MATH 166	Calculus II	4
STAT 330	Introductory Statistics	3
Pick one of the following:		4
GEOL 105 & 105L	Physical Geology and Physical Geology Lab	
GEOL 106 & 106L	The Earth Through Time and The Earth Through Time Lab	
Pick one of the following sequences:		8-12
Sequence A:		
PHYS 211 & 211L	College Physics I and College Physics I Laboratory	
PHYS 212 & 212L	College Physics II and College Physics II Laboratory	
Sequence B:		
PHYS 251 & 251L & 251R	University Physics I and University Physics I Laboratory and University Physics I Recitation	
PHYS 252 & 252L & 252R	University Physics II and University Physics II Laboratory and University Physics II Recitation	
Professional Education Requirements		
EDUC 321	Introduction to Teaching	3
EDUC 322	Educational Psychology	3
EDUC 451	Instructional Planning, Methods and Assessment	3

EDUC 481	Classroom Practice Methods of Teaching I: (Science)	3
EDUC 482	Classroom Practice/Methods of Teaching II: (Science)	3
EDUC 485	Student Teaching Seminar	1
EDUC 486	Classroom Management for Diverse Learners	3
EDUC 487	Student Teaching	9
EDUC 488	Applied Student Teaching	3
EDUC 489	Teaching Students of Diverse Backgrounds	3
Total Credits		**96-100**

Degree Requirements and Notes

- See School of Education (https://www.ndsu.edu/education/) for admission requirements.
- Courses taken P/F may not be used to satisfy any requirements.
- A grade of 'C' or better is required in all professional education courses.
- To be placed in student teaching, a 2.75 cumulative GPA and a 2.75 GPA in professional education coursework is required.
- To exit the program, a 2.75 cumulative GPA and a 2.75 GPA in professional education coursework is required as well as completing the Praxis Subject test and the Principles of Learning and Teaching test.