

Teaching Specialty - Chemistry

Major Requirements

Major: Chemistry Education

Degree Type: B.A. or B.S.

Required Degree Credits to Graduate: 136

General Education Requirements for Baccalaureate Degree

- A list of approved general education courses is available here (<http://bulletin.ndsu.edu/past-bulletin-archive/2017-18/academic-policies/undergraduate-policies/general-education/#genedcoursestext>).
- 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 the major, minor, and program emphases requirements for minimum grade restrictions, should they apply.

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

* May be satisfied by completing courses in another General Education category.

† May be satisfied with courses required in the major. Review major requirements to determine if a specific upper division writing course is required.

major Requirements

| Code | Title | Credits |
|---|--|---------|
| Chemistry Education Requirements | | |
| BIOL 124 & 124L | Environmental Science and Environmental Science Laboratory (May satisfy general education category S) | 4 |
| ENGL 324 | Writing in the Sciences (May satisfy general education category C) | 3 |
| GEOL 105 & 105L | Physical Geology and Physical Geology Lab (May satisfy general education category S and G) | 4 |
| GEOL 106 & 106L | The Earth Through Time and The Earth Through Time Lab (May satisfy general education category S) | 4 |
| STAT 330 | Introductory Statistics (May satisfy general education category R) | 3 |
| Teaching Specialty Requirements | | |
| Select one of the following: | | 4 |
| BIOL 150 & 150L | General Biology I and General Biology I Laboratory | |
| BIOL 151 & 151L | General Biology II and General Biology II Laboratory | |
| BIOC 460 | Foundations of Biochemistry and Molecular Biology I | 3 |
| 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 364 | Physical Chemistry I | 3 |
| CHEM 365 | Physical Chemistry II | 3 |
| CHEM 425 | Inorganic Chemistry I | 3 |
| CHEM 431 & 431L | Analytical Chemistry I and Analytical Chemistry I Laboratory | 5 |
| CHEM 491 | Seminar (Senior Capstone) | 2 |
| PHYS 251 & 251L | University Physics I and University Physics I Laboratory | 5 |
| PHYS 252 & 252L | University Physics II and University Physics II Laboratory | 5 |
| MATH 165 | Calculus I | 4 |
| MATH 166 | Calculus II | 4 |
| MATH 259 or MATH 265 | Multivariate Calculus Calculus III | 3-4 |
| MATH 266 | Introduction to Differential Equations | 3 |
| Select sequence A or sequence B: | | 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 | |
| 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 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 | | 112 |

Degree Requirements and Notes

- Courses taken P/F may not be used to satisfy any requirements.
- GPA of 2.75 or better in the teaching specialty is required for placement in student teaching and exit from the program.
- A grade of 'C' or better is required in all Professional Education Requirement courses.
- A GPA of 2.75 or better in professional education as well as passing the appropriate Praxis II exam are required to exit the program.
- See School of Education (<https://www.ndsu.edu/education>) for admission requirements.