

Comprehensive Science Education

Department Information

- **Department Location:**
Katherine Kilbourne Burgum Family Life, 4-H Center
- **Department Phone:**
701-231-7921
- **Department Web Site:**
www.ndsu.edu/education/ (<http://www.ndsu.edu/education/>)
- **Credential Offered:**
B.S.; B.A.
- **Official Program Curriculum:**
bulletin.ndsu.edu/undergraduate/program-curriculum/comprehensive-science-education/ (<http://bulletin.ndsu.edu/undergraduate/program-curriculum/comprehensive-science-education/>)

The comprehensive science education degree requires coursework in biological sciences, chemistry, physics and earth science, as well as mathematics. Teaching science in middle and secondary school requires deep knowledge of (a) science content, (b) current theories of adolescent development, and (c) current best practices in middle and secondary instruction. Accordingly, the comprehensive science education major combines coursework in related sciences with professional education courses on teaching and learning.

The Program

Teacher candidates in comprehensive science education are prepared to teach students grades 5-12 with skill and confidence. The program is designed to develop science content knowledge as well as proficiency in a range of science-related skills and laboratory practices. Our professional education courses prepare teacher candidates to incorporate active learning strategies, create effective methods for assessment, and adjust instruction to accommodate diverse learners. Teacher candidates also apply their knowledge and build their teaching skills during multiple clinical experiences in local schools.

Professional Education Courses

Teacher candidates may enroll in the 300-level professional education courses before being formally admitted to the School of Education (SOE). Prior to enrolling in the 400-level courses, teacher candidates must complete the application for admission to the SOE; attain a minimum of a 2.75 grade point average overall in their course work and education courses; and pass the Praxis Core Academic Skills test or meet minimum scores on the ACT+ Requirements for admission can be found on the School of Education website (<https://www.ndsu.edu/education/>).

Student Teaching

Student teaching (clinical practice) is the culmination of the teacher preparation program. During the clinical practice, teacher candidates apply the knowledge and skills acquired in their college courses to real-world classrooms under the supervision of experienced classroom teachers in middle or secondary schools. Faculty members from NDSU conduct regular on-site visits to support, encourage, and evaluate student teachers so that they gain the confidence and ability to join the teaching profession after graduation.

Student Advisement

Comprehensive science education teacher candidates are assigned to academic advisors who work closely with them to plan their programs of study and to advise and assist them as they progress to degree completion. Students are encouraged to meet with their advisor at least once every semester, as well as whenever needed. Appointments with advisors can be scheduled through the Navigate online system found on the Student Affairs web page, <https://www.ndsu.edu/enrollmentmanagement/studentuccess/>

licensure

Upon completing this program, teacher candidates are eligible for teacher licensure to teach all content areas of science in North Dakota. Teacher candidates interested in licensure to teach in other states should consult with their academic advisor because comprehensive science is not a typical teacher licensure category in all states. Our program is accredited by the Council for the Accreditation of Educator Preparation (CAEP) and approved by the North Dakota Education Standards and Practices Board (ESPB).

Career Opportunities

Science teachers are in high demand across the country, so our graduates usually obtain full-time employment in school districts shortly after graduation.

Sample Program Guide

Please note this is a sample program guide and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Once admitted, students are encouraged to work with their assigned academic advisor on a regular basis to review degree progress.

First Year			
Fall	Credits	Spring	Credits
BIOL 150 & 150L		4 BIOL 151 & 151L	4
ENGL 110		3 COMM 110	3
GEOL 105 & 105L		4 ENGL 120	3
MATH 105		3 GEOL 106 & 106L (Global Perspectives Gen Ed Requirement)	4
Wellness Gen Ed		2 Social & Behavioral Science Ed*	3
		16	17
Second Year			
Fall	Credits	Spring	Credits
BIOL 315 & 315L		4 BIOL 252	3
CHEM 121 & 121L		4 BIOL 364	3
EDUC 321		3 CHEM 122 & 122L	4
MICR 202 & 202L		3 EDUC 322	3
Humanities & Fine Arts Gen Ed*		3 Social & Behavioral Science Gen Ed	3
Complete Core Academic Skills Exam or access your ACT+ scores		Apply to the School of Education	
		17	16
Third Year			
Fall	Credits	Spring	Credits
BIOL 364		3 EDUC 481	3
CHEM 341 & 341L		4 EDUC 486	3
EDUC 451		3 PHYS 212 & 212L	4
PHYS 110		3 SOIL 217	3
PHYS 211 & 211L		4 STAT 330	3
		17	16
Fourth Year			
Fall	Credits	Spring	Credits
BIOL 359		3 EDUC 485	1
EDUC 482		3 EDUC 487	9
EDUC 489		3 EDUC 488	3
ENGL 324		3	
Humanities & Fine Arts Gen Ed		3	

Apply for Student Teaching

Complete PLT (grades 7-12) Exam

Complete Subject Area Assessment
Exam

15

13

Total Credits: 127

* One of these General Education courses needs to be selected from Category D - Cultural Diversity.