

CHEMISTRY EDUCATION

Subject endorsement to teach grades 7-12

The study of chemistry is broad but fundamental in a young student's education. A Chemistry Education is necessary because it connects and helps you understand other sciences such as physics, biology, and geology. With a degree to teach chemistry, you can be an important part of their junior high or high school education. In the Chemistry Education degree program at Wayne State College, you'll get a solid understanding of chemical sciences while also learning how to teach in a classroom setting to grade levels 7-12.

In addition to choosing the Chemistry subject endorsement, you will also need to choose a second subject endorsement to receive your B.A. or B.S.

fast facts

Credit hours: 72

Students must also take 30 credit hours of General Studies courses. A total of 120 credit hours are needed to graduate from WSC. Additional majors or minors can be added to help meet graduation requirements.

Degree options: B.A. or B.S.

Departments: Physical Sciences and Mathematics; Educational Foundations and Leadership

Schools: Science, Health, and Criminal Justice; Education and Behavioral Sciences

Popular pairings: Biology Education, Coaching, Middle Level Education

focus on results

Skills Learned

- Chemical processes and materials
- Chemical experiment and design
- Analytical, physical, and organic chemistry
- Biochemistry
- General physics and experimentation
- Advanced lab techniques and management
- Introductory meteorology or geology
- Teaching and instruction methods
- Curriculum development
- Classroom management and leadership

Possible Careers

- Chemistry teacher
- Physics teacher
- STEM specialist
- Lab manager
- Science tutor
- Science teacher
- Lab technician
- Chemist
- Chemical engineer
- Forensic scientist

Types of Employers

- Middle schools
- High schools
- Colleges and universities
- Education and learning centers
- Research labs
- Energy and utility companies
- Chemical companies
- Cosmetic companies
- Community programs
- Environmental agencies

outside the classroom

Activities / Opportunities

- Northeast Nebraska Teacher Academy (NENTA)
- Research projects and presentations
- Science bowls and fairs
- Service-Learning
- Study Abroad

Clubs / Organizations

- Nebraska State Education Association (NSEA) Aspiring Educators
- Student Council for Exceptional Children



Visit www.wsc.edu/clubs to learn more about clubs and organizations on campus.



Courses and outcomes

2026-27 Academic Year

The following courses are required for the program of study described on this sheet. Every effort is made to ensure this information is current, but please be aware that some content may have changed. To develop a plan for registering and taking these courses, please consult the current academic catalog and your advisor.

Program courses

For CAT 3, take MAT 130 Pre-Calculus. For CAT 7, take BIO 110 Biology Concepts.

Chemistry Core Courses

CHE 106 General Chemistry I.....	4
CHE 107 General Chemistry II.....	4
CHE 305 Analytical Chemistry.....	4

Chemistry Content Courses

CHE 314 Organic Chemistry I.....	4
CHE 326 Biochemistry I.....	4
CHE 393 Laboratory Techniques.....	1
CHE 456 Physical Chemistry: Thermodynamics.....	3
CHE 493 Laboratory Management.....	1
PHY 201 General Physics I.....	3
PHY 321 Physics Laboratory I.....	1
Upper-level BIO, CHE, NAT, or PHY electives.....	6
Select one of the following.....	4
EAS 110 Introduction to Meteorology (4)	
EAS 120 Introduction to Geology (4)	

Professional Education Courses

EDU 150 Introduction to Professional Education.....	3
EDU 245 Preparing for Level 2: Teacher Candidacy.....	0
EDU 250 Human Development and Cognition.....	3
EDU 275 PK-12 Instructional Design.....	3
EDU 310 Reading, Writing, and Assessment in Content Areas.....	2
EDU 409 Content Area Methods and Assessment.....	3
EDU 414 Content Area Practicum Experience.....	1
EDU 445 Preparing for Level 3: Clinical Practice.....	0
EDU 456 Clinical Practice and Seminar for the Secondary School.....	12
SPD 302 Inclusion and Co-teaching in General Education.....	3
SPD 436 Classroom Management through Social Emotional Learning 7-12.....	3

Student learning outcomes

Chemistry programs

1. Demonstrate mastery of the theoretical aspects of chemistry
2. Demonstrate mastery in the technical aspects of chemistry
3. Communicate effectively in a chemical manner, both verbally and in writing
4. Apply mathematical and mechanistic problem-solving skills to chemistry processes
5. Operate standard laboratory equipment and instruments and be able to interpret the data or spectra obtained

Education programs

Teacher candidates who successfully complete an education preparation program at Wayne State will be able to:

1. Create environments that support individual and collaborative

learning using knowledge of how students grow and develop, along with individual differences and diverse cultures. (InTASC Standards 1-3)

2. Plan for instruction by applying content knowledge, a variety of instructional strategies, and multiple methods of assessment to connect concepts for learners in real-world applications. (InTASC Standards 4-8)

3. Engage in ongoing professional learning and use evidence to reflect on and adapt practice to meet the needs of each learner. (InTASC Standard 9)

4. Seek leadership roles and opportunities to take responsibility for student learning, to collaborate with stakeholders, and to advance the profession. (InTASC Standard 10)

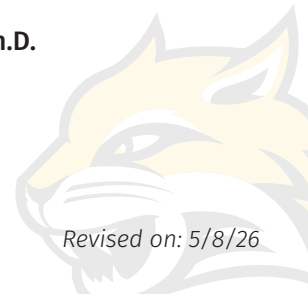
chemistry faculty



Visit www.wsc.edu/physical-sciences-mathematics-department to learn more about the Department Physical Sciences and Mathematics.

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