2026-27 Academic Year

SCIENCE EDUCATION

Field endorsement to teach grades 7-12

Biology, chemistry, Earth science, physics – you'll be able to teach all of these and more with the natural science endorsement in education from Wayne State College. You'll be prepared to become a science teacher for grades 7-12. Choosing to pursue a Science Education degree will train you in math, lab techniques, how to conduct research and experiments, and more. Your degree to teach science will give you a broad yet solid foundation in all subjects science-related, along with learning how to teach in a classroom setting.

If you choose the Science field endorsement, you are not required to choose any other endorsements to receive your B.A. or B.S.

fast facts

Credit hours: 85

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, Health Sciences Education

focus on results

Skills Learned

- Analytical, organic, and inorganic chemistry
- Introductory zoology and meteorology
- Introductory Earth science and astronomy
- Probability and statistics
- Evolutionary processes
- Biological systems and structures
- Research, data collection, and analysis
- Experimental plant science
- Modern lab techniques
- University physics and experimentation
- Advanced lab techniques and management

Possible Careers

- Science teacher
- Biology teacher
- Chemistry teacher
- Zoology teacher
- Physics teacher
- Science teacher
- Astronomy teacher
- Geology teacher
- Meteorology teacher
- Science tutor
- Scientific researcher

Types of Employers

- Middle schools
- High schools
- Colleges and universities
- Education and learning centers
- Non-profit organizations
- Community programs
- Government programs
- Research labs
- Environmental agencies
- Science museums
- Educational software companies

outside the classroom

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

Activities / Opportunities

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

Clubs / Organizations

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

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 Precalculus or MAT 140 Calculus I.
Students must complete a total of 52 credit hours of science content to cover all disciplines: Biology, Chemistry, Earth Science, and Physics. In the primary discipline, take a minimum of 22 credit hours. In the other three disciplines, take a minimum of 10 credit hours. Must take at least one laboratory techniques course: BIO 393, CHE 393, EAS 393, or PHY 393. At least 24 credit hours must be upper level.

Biology Discipline

BIO 110 Biology Concepts..... 4
BIO 200 Zoology..... 4
Electives.....2-14
BIO 210 Experimental Plant Science (4)
BIO 220 Human Anatomy (4)
BIO 320 Molecular Genetics (4)
BIO 325 Ecology (4)
BIO 340 Human Physiology (4)
BIO 370 Introduction to Research (2)
BIO 393 Laboratory Techniques (1)
BIO 425 Evolution (3)
Other BIO courses by advisement

Chemistry Discipline

CHE 106 General Chemistry I..... 4
CHE 107 General Chemistry II..... 4
Electives.....2-14
CHE 305 Analytical Chemistry (4)
CHE 314 Organic Chemistry I (4)
CHE 315 Organic Chemistry II (4)
CHE 326 Biochemistry I (4)
CHE 390 Inorganic Chemistry (3)
CHE 393 Laboratory Techniques (1)
CHE 426 Biochemistry II (3)
Other CHE courses by advisement

Earth Science Discipline

EAS 110 Introduction to Meteorology..... 4
EAS 120 Introduction to Geology 4
Electives.....2-14
EAS 302 Astronomy (4)
EAS 320 Rocks and Minerals (3)
EAS 340 Environmental Geology (3)
EAS 350 Topics in Earth Science (1-3)
EAS 360 Global Climate Change (3)
EAS 393 Laboratory Techniques (1)
EAS 440 Field Hydrology (3)
Other EAS courses by advisement

Physics Discipline

Select one of the following.....3-4
PHY 201 General Physics I (3)
PHY 301 University Physics I (4)
PHY 321 Physics Laboratory I.....1
Electives..... 6-18
PHY 202 General Physics II (3)
PHY 302 University Physics II (4)
PHY 322 Physics Laboratory II (1)
PHY 393 Physics Laboratory Techniques (1)
PHY 410 Physics for Teachers I (3)
PHY 420 Physics for Teachers II (3)
PHY 457 Modern Physics (3)
Other PHY courses by advisement

Professional Education Courses

EDU 150 Introduction of 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 (Science Methods)..... 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

Biology programs

1. Students will be able to interpret core concepts in biology.
2. Students will be able to apply concepts in biology to internships and/or student research.
3. Students will be able to accurately communicate core concepts in biology.

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)

science education faculty

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

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