

EDUCATION, BS: SCIENCE EDUCATION

The Science Education program is available for students who plan to teach in grades 4-12 middle/high school. Science Education students gain real world experience in the classroom through student teaching or on-the-job experiences at area schools. Students who satisfactorily complete the program requirements also meet the Wisconsin teacher certification requirements for teaching science subject areas in those grades. Students at this level of certification may add the following licenses while pursuing or after obtaining their Science licensure as their initial certification:

- Bilingual
- English as a Second Language
- World Languages

Requirements

General Education Requirements (GERs)

UW-Milwaukee has General Education Requirements (<https://catalog.uwm.edu/policies/undergraduate-policies/#generaleducationtext>) that must be met in order to earn a bachelor's degree. Some of the requirements of your program may fulfill the campus GERs. Please review the requirements and consult with your academic advisor.

Students must meet certain criteria and apply to their specific licensure program in addition to admission to UWM. Please see information about minimum credits, GPA, and other requirements at Advance to Professional Sequence. (p. 2)

Program Core

Code	Title	Credits
COMMUN 103	Public Speaking (GER-HU, fulfilled prior to program admission)	3
CURRINS 328	Introduction to Teaching Science and Mathematics in Middle and High School (fulfilled prior to program admission)	3
or CURRINS 300	Introduction to Teaching: Colloquium and Fieldwork	
Conservation of Natural Resources		
Requirement met in CURRINS 428 and CURRINS 519		
History and Philosophy of Science		
CURRINS 499	Independent Reading: (Post-baccalaureate students may be required to take CURRINS 799)	2-3
Total Credits		8-9

Content Area

Students complete the core science coursework and then select two specializations (if undergraduate) or one specialization (if post-baccalaureate). The selections are made in consultation with a faculty advisor **prior** to advancement to professional sequence. Contact your faculty advisor for the "MACSTEP Program Packet," which includes

course lists and specific details regarding the core science content and the specializations.

Students must earn a minimum GPA of 3.0 in all science content area courses.

Code	Title	Credits
ATM SCI 100	Survey of Meteorology	3
BIO SCI 150	Foundations of Biological Sciences I	4
BIO SCI 152	Foundations of Biological Sciences II	4
CHEM 102	General Chemistry	5
CHEM 104	General Chemistry and Qualitative Analysis	5
GEO SCI 100	Introduction to the Earth	3
PHYSICS 120	General Physics I (Non-Calculus Treatment)	4
PHYSICS 122	General Physics II (Non-Calculus Treatment)	4
Total Credits		32

Specializations

Specializations are in either Biology, Chemistry, Earth and Space Science, Environmental Science, or Physics. Each specialization is at least 10 additional credits in that area (not including the Core Content Courses in that discipline). Courses are selected with consultation with a faculty advisor.

Undergraduate students take 2 specializations (minimum 20 credits).
Post-baccalaureate students take 1 specialization (minimum 10 credits).

Code	Title	Credits
Biology Specialization-Suggested Coursework		
BIO SCI 310	General Ecology	4
BIO SCI 325	Genetics	4
Select one of the following:		3-4
BIO SCI 202	Anatomy and Physiology I	
BIO SCI 315	Cell Biology	
BIO SCI 383	General Microbiology	

Code	Title	Credits
Chemistry Specialization-Suggested Coursework		
CHEM 221	Elementary Quantitative Analysis	4
CHEM 281	Dead Men Do Tell Tales: An Introduction to Forensic Science	3
CHEM 341	Introductory Survey of Organic Chemistry	3

Code	Title	Credits
Earth and Space Science Specialization-Suggested Coursework		
ASTRON 103	Survey of Astronomy	3
GEO SCI 102	Evolution of the Earth	3
GEO SCI 150	Introduction to Ocean Sciences	3
Choose one:		1
ASTRON 104	Astronomy Laboratory	
GEO SCI 151	Ocean Sciences Laboratory	

Code	Title	Credits
Environmental Science Specialization-Suggested Coursework		
BIO SCI 310	General Ecology	4
CES 210	Introduction to Conservation and Environmental Science	3
or GEOG 350	Conservation of Natural Resources	
Select classes from Biology, Conservation and Environmental Science, and/or Freshwater Sciences in consultation with your faculty advisor.		3

Code	Title	Credits
Physics Specialization		
PHYSICS 309	Physics III: Modern Physics	3
PHYSICS 411	Mechanics	4
PHYSICS 420	Electricity and Magnetism I	3

Professional Sequence

MACSTEP Sequence - Milwaukee Area Collaborative Secondary Science (and Math) Teacher Education Program. Advancement to the professional sequence required. A grade of C or better must be earned in all professional sequence coursework, including student teaching.

Students must earn a minimum 2.75 GPA in all professional education courses.

Code	Title	Credits
Summer		
CURRINS 518	Science Methods I: Middle/Secondary Methods and Fieldwork	3
EXCEDUC 531	Inclusion for Secondary Educators: Humanities, the Arts, Foreign Language	3
Fall		
CURRINS 516	Field Work in Middle School	3
CURRINS 519	Science Methods II: Middle/Secondary Methods and Fieldwork	6
CURRINS 541	Principles and Methods of Teaching ESL	3
EXCEDUC 601	Behavioral Supports	3
Spring		
CURRINS 428	Student Teaching Science Seminar	3
Student Teaching (Spring) ‡		
Take 12 credits:		12
CURRINS 427	Student Teaching in Science	
Total Credits		36

‡ Students must complete an application in order to be assigned a student teaching placement. To be approved for placement, additional criteria must be met. See Benchmarks (p. 3) for details.

Requirements for Graduation (<https://catalog.uwm.edu/policies/undergraduate-policies/#academicpolicies>)

For information on credit, GPA, and other requirements for graduation, see UWM Degree Requirements (<https://catalog.uwm.edu/policies/undergraduate-policies/>).

Post Baccalaureate Pathway

Students follow the same pathway as first-degree students. Post-baccalaureate students are only required to complete one specialization.

Additional Requirements for Certification

- Successfully complete the content knowledge requirement for your program through one of the following:
 - Minimum 3.0 GPA in content coursework.
 - Passing score on the Praxis Subject Assessment Exam: General Science.
- Earn a minimum cumulative GPA of 2.75 in all UWM and transfer courses.
- Demonstrate successful completion of the Pedagogical Knowledge Assessment (PKA).
- Meet all applicable Wisconsin statutory and testing requirements.
- Complete approved coursework in the history, culture, and tribal sovereignty of American Indian tribes and bands located in Wisconsin, met through one of the following:

Code	Title	Credits
ANTHRO 213	American Indian Peoples of Wisconsin (GER-CD, GER-SS)	3
ENGLISH 276	Introduction to American Indian Literature: (topic: History, Literature & Sovereignty of Wisconsin Tribes (GER-CD, GER-HU))	3

ACT 31: History, Culture and Sovereignty Rights of Wisconsin Indians Workshop

Or an approved equivalent

Advance to Major

Advance to Professional Sequence

Application to the Science Education program requires satisfactory completion of the requirements listed below. For more information about the application process, visit our website (<https://uwm.edu/education/academics/science/>).

- **Satisfaction of QL-A, QL-B, OWC-A, and OWC-B.**
- **Completion of COMMUN 103**, with a grade of C or better. Note: Completion of this course also fulfills part of the Humanities GER requirement.
- **Completion of CURRINS 300**, Introduction to teaching Science in Middle and High School, with a grade of C or better.
- **A 2.5 minimum cumulative GPA** in all UWM and transfer courses at the time of admission application.
- **A 3.0 cumulative GPA** in all Science content courses.
- **A minimum of 58 credits** (UWM and transfer credits) at the time of admission application. It is not required to have all the Core Curriculum courses completed at the time of application.
- **Meeting with advisor** to begin program.
- For post-baccalaureate candidates, a bachelor's degree from an accredited college or university.

Criminal Background Check

Criminal Background Check (CBC). For all students, a background check shall be completed no more than 6 months prior to the date of admission (advance to professional sequence) into the educator preparation

program. The background check shall include a review of criminal conduct at the state and federal levels.

Benchmarks

Student Teaching

Students must complete an application to request/be assigned a student teaching placement. Deadlines for submission are posted by the Office of Clinical Experiences. (<http://uwm.edu/education/academics/clinical-experiences/>)

To be approved for placement, you must meet the following criteria:

- Be advanced to the professional sequence.
- Completion of all required coursework.
- Cumulative GPA of a minimum 2.75.
- A minimum of 2.75 in all professional sequence courses.
- Content Knowledge Requirement: A minimum of 3.0 in all your science content used for certification or passing score on the Praxis II General Science Content Test.
- C or better in all science content being used for certification.
- C or better in all professional sequence courses.
- TB test results submitted to the Office of Clinical Experiences.
- Passing Criminal Background Check submitted to the Office of Clinical Experiences.

Undergraduate Advising

Our purpose is to provide collaborative, mentoring relationships which promote educational, career, and professional development. We value a student-centered, holistic, and ethical approach to advising based on strong partnerships with students, faculty and staff, and the larger campus community. We are committed to creating a respectful and supportive environment. We encourage students to be self-reliant through informed decisions and choices based upon dissemination of accurate information. We value our own continuous professional development to enhance the quality of the advising experience.

How to Prepare for an Advising Meeting

- Review your Advisement Report in PAWS (<http://uwm.edu/registrar/academic-unit-services/paws-academic-advisement/>).
- Come prepared with questions or topics for discussion.
- Make a list of courses you think you should take.
- Investigate opportunities to prepare for the job you want.
- Keep a record of your academic progress.
- Understand you are ultimately responsible for creating your educational, life, and career plans.
- Maintain honest and open communication with your advisor.
- Take responsibility for choices you make as a student and member of the UW-Milwaukee community.

Scheduling an Appointment

Office of Student Services
Enderis Hall, Room 209
(414) 229-4721
soeinfo@uwm.edu

Graduate Advising

If you are a School of Education graduate student, you may schedule an appointment with your faculty advisor by contacting your faculty advisor directly. Faculty contact information can be found in the Directory (<https://uwm.edu/education/directory/>). Your faculty advisor will be listed in your PAWS account.

Honors in the Department of Teaching and Learning

Departmental Honors are granted to students who have achieved a cumulative GPA of 3.500 or above, based on a minimum of 40 graded UWM credits earned prior to the final semester.

College of Community Engagement and Professions Dean's Honor List

GPA of 3.750 or above, earned on a full-time student's GPA on 12 or more graded credits in a given semester.

Honors College Degree and Honors College Degree with Distinction

Granted to graduating seniors who complete Honors College requirements, as listed in the Honors College (<https://catalog.uwm.edu/honors-college/>) section of this site.

Commencement Honors

Students with a cumulative GPA of 3.500 or above, based on a minimum of 40 graded UWM credits earned prior to the final semester, will receive all-university commencement honors and be awarded the traditional gold cord at the December or May Honors Convocation. Please note that for honors calculation, the GPA is **not** rounded and is truncated at the third decimal (e.g., 3.499).

Final Honors

Earned on a minimum of 60 graded UWM credits: Cum Laude - 3.500 or above; Magna Cum Laude - 3.650 or above; Summa Cum Laude - 3.800 or above.