

Duluth Campus

Teaching Life Science B.A.Sc.

Biology, Education

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2011
- Required credits to graduate with this degree: 139 to 172
- Required credits within the major: 120 to 156
- This program is 9 terms (4½ years) long.
- This program requires summer terms.
- Degree: Bachelor of Applied Science

The B.A.Sc. degree in teaching life science is offered by the Department of Education in conjunction with the Department of Biology. This major prepares students to teach all science areas in grades 5-8 and to teach life science in grades 9 through 12.

Students have the option of also completing the environment education emphasis with this major.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Admission Requirements

Students must complete 45 credits before admission to the program.

Freshman and transfer students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:

- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the secondary and K-12 licensure programs are bound by the policies in effect at the time of application to the licensure program. Admission is based on criteria established by the Department of Education that are consistent with Minnesota policies and standards established by the National Council for Accreditation in Teacher Education.

A student must have: 1) completed EDUC 1101; 2) a GPA of at least 2.50 overall and in major courses completed at the time of application; 3) taken the Pre-Professional Skills test (PPST); 4) passing scores on a nationally recognized standardized test such as the PPST, ACT, or SAT; and 5) documented hours working with students in grade 5-12. Students must submit a letter of application, resume, letters of recommendation, and a copy of their APAS report.

There are alternatives to these established admission procedures to encourage individuals from underrepresented groups and other students as determined by the department.

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

Required prerequisites

Introductory Course (1 cr)

This course will be waived for transfer students or students who change colleges from a college where it is not required.

Register course for one credit.

[UST 1000](#) - Learning in Community (1.0 - 2.0 cr)

Admission Requirement (3 cr)

[EDUC 1101](#) - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled

including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the [Liberal Education Program](#).
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

Requirements for the B.A.Sc. in teaching life science include:

* Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

* Degree candidates must complete at least 20 of the last 30 degree credits immediately before graduation at UMD.

* Students must make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.

* Program completers must pass all tests required by the Minnesota Board of Teaching to be recommended for licensure.

* Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Lower Division (56-59 cr)

[AST 1040](#) - Introductory Astronomy [LE CAT, NAT SCI] (3.0 cr)

[BIOL 1011](#) - General Biology I [LE CAT, NAT SCI] (5.0 cr)

[BIOL 1012](#) - General Biology II [SUSTAIN] (5.0 cr)

[BIOL 3100](#) - Cell Biology (3.0 cr)

[BIOL 2201](#) - Genetics (3.0 cr)

[BIOL 3771](#) - Human Anatomy (4.0 cr)

[BIOL 2801](#) - General Ecology (3.0 cr)

[EES 1110](#) - Geology and Earth Systems [LE CAT, NAT SCI, SUSTAIN] (4.0 cr)

[MATH 1250](#) - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)

[PHYS 1001](#) - Introduction to Physics I [LE CAT, NAT SCI] (5.0 cr)

[PHYS 1002](#) - Introduction to Physics II (5.0 cr)

Biology Laboratory (2 cr)

[BIOL 2802](#) - Ecology Laboratory (2.0 cr)

or [BIOL 2102](#) - Cell Biology Laboratory (2.0 cr)

or [BIOL 2202](#) - Genetics Laboratory (2.0 cr)

Chemistry (10-13 cr)

[CHEM 1113](#) - Introduction to General, Organic, and Biological Chemistry I [LE CAT, NAT SCI] (5.0 cr)

[CHEM 1114](#) - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)

or [CHEM 1153](#) - General Chemistry I [LE CAT, NAT SCI] (4.0 cr)

[CHEM 1154](#) - General Chemistry Lab I [LE CAT, NAT SCI] (1.0 cr)

[CHEM 1155](#) - General Chemistry II (4.0 cr)

[CHEM 1156](#) - General Chemistry Lab II (1.0 cr)

[CHEM 2541](#) - Organic Chemistry I (3.0 cr)

CHEM 2543 is desirable but not required

or [CHEM 1161](#) *{Inactive}* [LE CAT4, NAT SCI] (5.0 cr)

[CHEM 1162](#) *{Inactive}* (5.0 cr)

CHEM 2541 - Organic Chemistry I (3.0 cr)
CHEM 2543 is desirable but not required

Upper Division (57-59 cr)

Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; and completion of at least 85 percent of teaching major courses.

Students must have personal liability insurance while they are working in field placement settings.

EDUC 3412 (register for 4 cr)
EDSE 4600 (register for 12 cr)
BIOL 3401 - Evolution (3.0 cr)
EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4214 - Teaching Content-Area Reading (3.0 cr)
EDSE 4255 - Teaching Science: Grades 5-12 (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDSE 4600 - Student Teaching (3.0 - 24.0 cr)
EDUC 3412 - The Computer in Education (3.0 cr)
EDUC 4234 - Science, Technology, and Society [SUSTAIN] (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4110 - Advanced Earth Science for Teachers (2.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)
EES 3210 *{Inactive}* (4.0 cr)
or EES 2110 - Reconstructing Earth's Climate History (4.0 cr)
or EES 2120 - The Earth's Dynamic Interior (3.0 cr)
BIOL 3703 - Animal Physiology (3.0 cr)
or BMS 3011 - General Physiology (4.0 cr)

Course From Other Program (3 cr)

WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Diversity Immersion Experience Requirement

Candidates must spend a minimum of 40 hours at a formal or nonformal educational setting that has a high percentage (greater than 50 percent) of children, young adults, or families from diverse communities. The format of this experience allows candidates to observe, interact, and reflect in an educational setting guided by focus questions and recommended readings. Evidence of completion of this requirement is included in candidates' professional portfolios.

Students must meet this requirement after they take EDUC 1101 and before they complete their education program. Registration for credit is not required for this experience; however, candidates who wish to earn credit may register for EDUC 4991.

Program Sub-plans

A sub-plan is not required for this program.

Environmental Education

Students may complete the environmental education emphasis with this major. The environmental education emphasis is offered by the Department of Education in conjunction with the Department of Biology and the Department of Health, Physical Education, and Recreation. This emphasis enhances the student's major by integrating environmental education into formal (pre-K-12) as well as nonformal education settings such as parks and nature centers. This emphasis must be taken in conjunction with the teaching life science or teaching earth and space science majors. The emphasis is noted on the student's diploma.

Students must complete 31 credits for the environmental education emphasis.

Requirements (25 cr)

ENED 3309 - Outdoor Leadership (1.0 cr)
ENED 3310 - Outdoor Leadership Field Experience (2.0 cr)
ENED 3341 - Field Interpretive Techniques Fall (3.0 cr)
ENED 3342 - Field Interpretive Techniques - Winter & Spring (3.0 cr)
ENED 4163 - Outdoor Education Methods (3.0 cr)
HLTH 1650 *{Inactive}* (1.0 cr)
HLTH 1700 - First Responder (3.0 cr)



[PETE 3507](#) - Teaching Outdoor Skills - Winter & Spring (2.0 cr)

[ENED 1203](#) - Outdoor Skills I (2.0 cr)

[ENED 1204](#) - Outdoor Skills II (2.0 cr)

[ENED 4997](#) - Recreation Practicum (3.0 cr)

Electives (6 cr)

Pre-approved natural science courses may be substituted.

Take 6 or more credit(s) from the following:

- [BIOL 3603](#) - Plant Taxonomy (3.0 cr)
- [BIOL 4731](#) - Entomology (3.0 cr)
- [BIOL 4761](#) - Ichthyology (3.0 cr)
- [BIOL 4763](#) - Ornithology (3.0 cr)
- [BIOL 5833](#) - Stream Ecology (3.0 cr)
- [BIOL 5861](#) - Lake Ecology (3.0 cr)
- [ENED 5325](#) - Sustainability Issues Investigation (2.0 cr)
- [ES 2803](#) - Issues in Global Ecology [LE CAT] (3.0 cr)
- [GEOG 3401](#) - Weather and Climate (3.0 cr)
- [EES 1610](#) - Oceanography [LE CAT, NAT SCI, SUSTAIN] (3.0 cr)
- [EES 5210](#) - Glacial and Quaternary Geology (4.0 cr)