Biology Major:
Environmental Science
Concentration -
Bachelor of Arts (BA)

Major requirements

(All colleges, excluding teacher certification programs)

39 credits (67 total credits including CHM, MTH, and GEO requirements)

Each student must have a minimum of three 400 level BIO credits (excluding BIO 450, BIO 479, BIO 489, BIO 491, BIO 495, and BIO 499) to fulfill requirements of the major.

BIO 105 General Biology 4
BIO 203 Organismal Biology 4
BIO 306 Genetics 4
BIO 307 Ecology 3
BIO 315 Cell Biology 4
BIO 419 Quantitative Methods in Ecology 3
BIO 491 Capstone Seminar in Biology 1

Select 16 credits of elective from the following: 16

- BIO 302 Introductory Plant Identification
- BIO 304 Plant Biology
- BIO 321 Ornithology
- BIO 337 Plant Physiology
- BIO 341 Limnology
- BIO 404 Plant Taxonomy
- BIO 405 Aquatic and Wetland Vascular Plants
- BIO 406 Parasitology
- BIO 412 Mycology
- BIO 414 Freshwater Invertebrate Zoology
- BIO 422 Ichthyology
- BIO 429 Evolution
- BIO 441 Environmental Toxicology
- BIO 442 Plant Microbe Interactions
- BIO 447 Standard Methods/Quality Assurance Water Analyses
- BIO 456 Plant Ecology
- BIO 458 Comparative Animal Physiology
- BIO 464 Stream and Watershed Ecology
- BIO 473 Marine Biology
- BIO 476 Ecosystem Ecology
- MIC 230 Fundamentals of Microbiology
- BIO 499 Independent Research (up to two credits may apply)
- MIC 350 Bacterial Diversity
- MIC 434 Aquatic Microbial Ecology

Select three semesters of chemistry, including: 15-18

- CHM 103 General Chemistry I
- CHM 104 General Chemistry II
- And one of the organic chemistry options:

Option 1:
- CHM 300 Survey of Organic Chemistry

Option 2:
- CHM 303 Organic Chemistry Theory I
- CHM 304 and Organic Chemistry Theory II
- CHM 305 and Organic Chemistry Laboratory

Select eight credits of mathematics, including one of the following: 8

- MTH 145 Elementary Statistics
- or MTH 265 Mathematical Models in Biology
- MTH 175 Applied Calculus
- or MTH 207 Calculus I

Select a minimum of five credits of environmental science support courses, including one of the following options: 5

Option A:
- CHM 301 Analytical Chemistry

Option B: Select two of the following:

- GEO/ESC 345 Remote Sensing
- GEO/ESC 385 Introduction to Geographic Information Systems and Science
- GEO 485 Advanced Geographic Information Science

Option C: Select two of the following:

- CS 120 Software Design I
- CS 220 Software Design II
- MTH 405 Statistical Methods
- MTH 445 Correlation and Regression Analysis
- MTH 446 Analysis of Variance and Design of Experiments
- MTH 447 Nonparametric Statistics
- MTH 448 Operations Research

Total Credits 67-70

Degree requirements

All students must complete the general education, college core, major/minor, and university degree requirements in order to qualify for a degree. The easiest way to track all of these requirements is to refer to the Advisement Report (AR) found in the Student Information System (WINGS) Student Center. All enrolled students have access to the AR.

- General education (http://catalog.uwlax.edu/undergraduate/generaleducation)
- College core (p. 1)
- Baccalaureate degree requirements (p. 2)

College of Science and Health (SAH)
Bachelor of Arts core requirements

B.S. and B.A. students graduating from the College of Science and Health are required to take two natural laboratory science courses selected from the general education laboratory science category (GE 05) and from BIO 203, BIO 304, BIO 210, CHM 104, ESC 221, ESC 222, PHY 104, or PHY 204, and they either must take two mathematics courses or one math course and one computer science course from the math/logical systems category of the general education requirements (GE 02). One of the two science courses must be from a department outside of the student’s major department.

Note: Math courses can be pairs, i.e. 150 and 151; MTH/CS majors can use two science courses from same department.
For the Bachelor of Arts degree, students must complete a major from the college and proficiency in a foreign language at the 202 level or an ESL proficiency score of 80 or above on the La Crosse Battery of exams for non-native speakers of English. Contact the English as a Second Language Institute (http://www.uwlax.edu/esl) for eligibility and regulations. Students must also complete:

- a minor in the College of Liberal Studies or
- 15 credits at the 300/400 level in the College of Liberal Studies. Internship credits generally do not count toward this college core option.

**Baccalaureate degree requirements**

Candidates for the Bachelor of Arts or the Bachelor of Science degrees must accomplish the following:

1. Fulfill the general education requirements.
2. Complete at least one ethnic studies (diversity) course.
3. Complete the courses prescribed by the Undergraduate Curriculum Committee for the degree desired in the respective school or college. (No substitutions for graduation may be made in course requirements for a major or minor after the fourth week of the last semester of the senior year.)
4. Earn a minimum of 120 semester credits with at least a 2.00 cumulative GPA. At least 40 credits must be earned in 300/400 (senior college) level courses. Courses earned at the 100/200 level that transferred to UW-L as 300/400 level courses do not apply to this requirement nor do courses from two-year schools.
5. Complete major and minor requirements with at least a 2.00 GPA in each major and minor (and concentration or emphasis, if selected).
6. A minimum of 30 semester credits in residence at UW-L is required for graduation. (See undergraduate resident requirement (http://catalog.uwlax.edu/undergraduate/academicpolicies/graduation/#undergraduate-residence-requirement).)
7. File a completed "Apply for Graduation" form via the WINGS Student Center as soon as the student has registered for his or her final semester or summer term in residence. December and winter intersession graduates should file by May 1. May and summer graduates should file by December 1.

Grade point average requirements for some programs will be considerably higher than 2.00. Re-entering students may be required to earn credits in excess of the 120 needed for graduation in any curriculum in order to replace credits earned in courses in which the content has changed substantially in recent years. Each case will be judged on its own merit.

No degree will be awarded unless all requirements are fulfilled and recorded within 30 days after the official ending date of each term.

**Sample degree plan**

Below is a sample degree plan that can be used as a guide to identify the courses required to complete the major and other requirements needed for degree completion. The actual degree plan may differ depending on the course of study selected (second major, minor, etc.). This sample plan also assumes readiness for each course and/or major plan. Actual degree plans may differ. Some courses may not be offered every term. Review course descriptions or the class timetable for course offering information.

The sample degree plans represented in this catalog are intended for first-year students entering UW-L in the fall term. Students should use the Advisement Report (AR) in WINGS (https://wings.uwlax.edu/psp/csprods/r?cmd=login&languageCd=ENG) and work closely with their faculty advisor(s) and college dean’s office to ensure declaration and completion of all requirements in a timely manner.

**General Education Program**

General education (Gen Ed) is the common educational experience for all undergraduates at UW-L. Sample degree plans include Gen Ed placeholders to ensure completion of the general education curriculum. Courses may be rearranged to fit the needs or recommendations of the student’s program of study. Gen Ed courses may be taken during winter term (January between the semesters) and summer to reduce the course load during regular terms (fall and spring). Consult with your advisor and/or the assistant to the dean in your college for assistance with course and schedule planning. Refer to the general education requirements (http://catalog.uwlax.edu/undergraduate/generaleducation) for more specific details.

Note: at least 40 credits of the 120 credits required must be earned at the 300/400 level.

This sample degree plan does not establish a contractual agreement. It identifies the minimum requirements a student must successfully complete, to qualify for a degree, in a format intended to assist the student plan their academic career.

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<tr>
<th>Year 1</th>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 105 (Gen Ed Natural Lab Science)</td>
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<td>CHM 103 (Gen Ed Natural Lab Science)</td>
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<td>CST 110 (Gen Ed Literacy-Oral)</td>
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<td>Gen Ed Self &amp; Society</td>
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<td>HIS 101, 102, or ARC 200 (Gen Ed World Hist)</td>
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<td>BIO 203</td>
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<td>MTH 207 or 175 (Gen Ed Math)</td>
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<td>ENG 110 or 112 (Gen Ed Literacy- Written)</td>
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<tr>
<td>MTH 145 or 265 (Gen Ed Lang/Logical Systems)</td>
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<td>CHM 300</td>
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<td>BIO 307</td>
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<td>BIO 306</td>
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<td>CHM 104</td>
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<td>202-Level Language (SAH BA Core)</td>
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<td>Gen Ed Minority Cultures</td>
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<td>BIO 315</td>
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<td>Environmental Support Course (see list)</td>
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<td>BIO Elective from list</td>
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<td>Gen Ed Health &amp; Well Being</td>
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<td>Gen Ed Hum-Lit</td>
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<td>Gen Ed Global Studies</td>
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Total Credits: 120