Biology, Ecology and Environmental Biology Emphasis, Comprehensive Major

Liberal Arts (Code 080-001)

University Requirements

GRADUATION REQUIREMENTS FOR BACCALAUREATE DEGREE

Credit Requirements

Minimum total for graduation 1
120

Upper division credits (courses numbered 300 and higher) 2
39

Liberal Education Core (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header1)
36

Academic Concentrations (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header16)

Grade Point Requirements (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header14) 2

<table>
<thead>
<tr>
<th>Total</th>
<th>2.00 average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>2.00 average</td>
</tr>
<tr>
<td>Major</td>
<td>2.00 average</td>
</tr>
<tr>
<td>Minor</td>
<td>2.00 average</td>
</tr>
<tr>
<td>Certificate</td>
<td>2.00 average</td>
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</tbody>
</table>

University Residency Requirements (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header15)

Minimum total
30

Senior year
23

Major, Standard, upper division in residence
12

Major, Comprehensive, upper division in residence
21

Certificate
25 percent of credits

Procedures Required for Graduation

Obtain admission to the degree program and/or the College offering it.

Apply for graduation on CampS.

1 Certain programs exceed this minimum.

2 See special requirements in each College.

Applicability of Credits Toward Graduation

Junior College or Two-Year College Credits. A maximum of 72 semester credits earned in a junior college or two-year college will be accepted as degree credits at UW-Eau Claire.

Extension Credits. Credits earned in credit outreach courses offered by UW-Eau Claire are treated as resident credits. Credits earned in extension courses offered by other units of the University of Wisconsin System are treated as transfer credits. All other (non-UW) extension and correspondence credits are normally limited to one-fourth of the total required for graduation from any curriculum.

WTCS Credits. A maximum of 72 semester credits earned in college parallel programs at Madison Area Technical College, Milwaukee Area Technical College, Nicolet Area Technical College, or Chippewa Valley Technical College may be accepted as degree credits at UW-Eau Claire. A set number of general education courses will be accepted from other technical schools. Occupational and technical courses may also be considered for transfer if the quality and content of the course work from the technical college is judged to be comparable to course work at UW-Eau Claire. Refer to the Transfer Credit Wizard (https://my.uwec.edu/psp/PUBLIC/EMPLOYEE/HRMS/c/EAU_SS_CUSTOM.EAU_TRNCRDWZ.GBL) or contact the UW-Eau Claire Admissions Office for information about the current transfer policy.

USAFI Credit. UW-Eau Claire will accept up to 32 semester credits for work done through the United States Armed Forces Institute, under the provision for non-UW correspondence credit (see Extension Credits above).

Activity Credit (band, chorus, drama, KINS 100-184 courses) Students may count toward graduation no more than one credit of KINS 110-184 courses. Students may count toward graduation no more than four credits earned in any single activity course and no more than 12 credits resulting from any combination of activity courses (excluding KINS 110-184 courses).

Other Restricted Credits. For other University restrictions, see the following: Cooperative Education; Credit by Examination; Satisfactory/Unsatisfactory Registration; Transfer of Credits. College or departmental restrictions may also be placed on Independent Study (399-499 courses), Directed Study (395-495), and other types of credits.

APPLICABILITY OF CREDITS TOWARD GRADUATION

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
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<tbody>
<tr>
<td>Satisfactory/Unsatisfactory</td>
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<tr>
<td>Total degree credit</td>
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<tr>
<td>Major, Standard</td>
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<tr>
<td>Major, Comprehensive</td>
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<tr>
<td>Minor</td>
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</tbody>
</table>

Credit by Examination

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total degree credit</td>
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<tr>
<td>Major or minor</td>
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</table>

Two-Year College Credits

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<thead>
<tr>
<th>Credit Restrictions</th>
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<tbody>
<tr>
<td>Total degree credit</td>
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</table>

Activity credit (band, chorus, drama, KINS 100-184)

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
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</thead>
<tbody>
<tr>
<td>Total KINS 100-184</td>
</tr>
<tr>
<td>Total Band, chorus, drama</td>
</tr>
<tr>
<td>Single course band, chorus, drama</td>
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</tbody>
</table>

Extension credits

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
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</thead>
<tbody>
<tr>
<td>UW-System</td>
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<tr>
<td>Other extension/correspondence</td>
</tr>
</tbody>
</table>

USAFI

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>USAFI</td>
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</tbody>
</table>
Liberal Education Core

The University of Wisconsin-Eau Claire measures learning outcomes to ensure that its graduates have achieved a liberal education and prepared themselves to contribute to a complex society. Upon graduation, each undergraduate will have met the four learning goals of our liberal education core and the 11 learning outcomes they comprise.

LIBERAL EDUCATION CORE REQUIREMENTS

<table>
<thead>
<tr>
<th>Knowledge Goal</th>
<th>a minimum of 36 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Outcome 1 (K1): Natural Sciences (<a href="http://catalog.uwec.edu/undergraduate/attribute-k1/">http://catalog.uwec.edu/undergraduate/attribute-k1/</a>)</td>
<td>Two (2) learning experiences</td>
</tr>
<tr>
<td>Knowledge Outcome 2 (K2): Social Sciences (<a href="http://catalog.uwec.edu/undergraduate/attribute-k2/">http://catalog.uwec.edu/undergraduate/attribute-k2/</a>)</td>
<td>Two (2) learning experiences</td>
</tr>
<tr>
<td>Knowledge Outcome 3 (K3): Humanities (<a href="http://catalog.uwec.edu/undergraduate/attribute-k3/">http://catalog.uwec.edu/undergraduate/attribute-k3/</a>)</td>
<td>Two (2) learning experiences</td>
</tr>
<tr>
<td>Knowledge Outcome 4 (K4): Fine Arts (<a href="http://catalog.uwec.edu/undergraduate/attribute-k4/">http://catalog.uwec.edu/undergraduate/attribute-k4/</a>)</td>
<td>One (1) learning experience</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Skills Goal</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Skills Outcome 1 (S1): Written and Oral Communication (<a href="http://catalog.uwec.edu/undergraduate/attribute-s1/">http://catalog.uwec.edu/undergraduate/attribute-s1/</a>)</td>
<td>Two (2) learning experiences</td>
</tr>
<tr>
<td>Skills Outcome 2 (S2): Mathematics (<a href="http://catalog.uwec.edu/undergraduate/attribute-s2/">http://catalog.uwec.edu/undergraduate/attribute-s2/</a>)</td>
<td>One (1) learning experience</td>
</tr>
<tr>
<td>Skills Outcome 3 (S3): Creativity (<a href="http://catalog.uwec.edu/undergraduate/attribute-s3/">http://catalog.uwec.edu/undergraduate/attribute-s3/</a>)</td>
<td>One (1) learning experience</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Responsibility Goal</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Responsibility Outcome 1 (R1): Equity, Diversity, and Inclusivity (<a href="http://catalog.uwec.edu/undergraduate/attribute-r1/">http://catalog.uwec.edu/undergraduate/attribute-r1/</a>)</td>
<td>Two (2) learning experiences</td>
</tr>
<tr>
<td>Responsibility Outcome 2 (R2): Global Perspectives (<a href="http://catalog.uwec.edu/undergraduate/attribute-r2/">http://catalog.uwec.edu/undergraduate/attribute-r2/</a>)</td>
<td>One (1) learning experience</td>
</tr>
<tr>
<td>Responsibility Outcome 3 (R3): Civic and Environmental Issues (<a href="http://catalog.uwec.edu/undergraduate/attribute-r3/">http://catalog.uwec.edu/undergraduate/attribute-r3/</a>)</td>
<td>One (1) learning experience</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integration Goal</th>
<th>Two (2) learning experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration Outcome 1 (I1): Integration (<a href="http://catalog.uwec.edu/undergraduate/attribute-i1/">http://catalog.uwec.edu/undergraduate/attribute-i1/</a>)</td>
<td></td>
</tr>
</tbody>
</table>

Service-Learning Goal

Service-Learning (http://catalog.uwec.edu/undergraduate/attribute-sl/#header13) 30 hours

College Degree Requirements

Bachelor of Arts or Bachelor of Science Degree (B.A./B.S.)

University Graduation Requirements. All candidates for degrees must fulfill the requirements for credits, curriculum, GPA, and University residency as specified in the section of this catalog titled University Graduation Requirements (http://catalog.uwec.edu/undergraduate/graduation-requirements/).

College Graduation Requirements: Grade Point Averages. All candidates for degrees in the College of Arts and Sciences must earn minimum resident and total GPAs of 2.00 in the major, the minor, and the certificate. The resident and total GPAs for the major are computed using all attempted credits applicable to the major including those offered by departments other than the major department. The resident and total GPAs for the minor and the certificate are computed similarly.

Major-Minor and Major-Certificate Requirements. A standard major (a minimum of 36 credits) must be supplemented by a minor (a minimum of 24 credits) or by a certificate (12 to 18 credits) to meet graduation requirements for completing a first and second degree program. No minor or certificate is required with a Comprehensive Major (60 or more credits) or with two majors of 36 or more credits each.

Certain degree programs, which include Comprehensive Majors, may require more than the minimum of 120 credits for graduation.

Acceptable academic program combinations are determined at the college level. A major and a minor or a major and certificate or two majors (if available) may not be elected in the same department or program, except in the approved combinations listed here (http://catalog.uwec.edu/undergraduate/arts-sciences/#academicprogramstext).

College Credits. Earn at least 90 credits in courses offered by the College of Arts and Sciences.

Bachelor of Arts Degree in the College of Arts and Sciences (B.A.)

Fulfillment of all University Graduation Requirements (which includes the Liberal Education Core); all College-level degree requirements (major and minor/certificate emphases, GPAs, earning at least 90 credits in Arts and Sciences course work); foreign language competency at the 102 level. Foreign language competency may be met in one of two ways: (1) Achieve a score on the foreign language placement test that qualifies the student to enter the 201-level course in a foreign language. (2) Earn a grade of at least C (not C-) or a mark of S in a 102-level foreign language course (or AIS 112 or AIS 122 / LANG 122 or CSD 103).

Bachelor of Science Degree in the College of Arts and Sciences (B.S.)

Fulfillment of all University Graduation Requirements (which includes the Liberal Education Core); all College-level degree requirements (major and minor/certificate emphases, GPAs, earning at least 90 credits in Arts and Sciences course work); mathematics competency at the MATH 111, MATH 112
or MATH 113 level. Mathematics competency can be met in one of three ways: (1) Achieve a score on the mathematics placement test that qualifies the student to enter MATH 114. (2) Earn a grade of at least C (not C-) or a mark of S in MATH 111, MATH 112, or MATH 113. (3) Achieve a satisfactory score on the MATH 112 competency test. This test may be attempted no more than two times.

**Major Requirements**

**Liberal Arts (Code 080-001)**

This emphasis provides extensive exposure to topics in ecology, field biology, and biological conservation. It is intended for students who are interested in field research, environmental monitoring and management, or natural resource conservation, or who desire strong preparation for graduate programs in ecology, environmental biology, or related fields. Research or internship is strongly recommended.

The emphasis requires completion of the core, the required credits as listed below, and biology electives to total at least 60 credits.

**Core Requirements for All Biology Majors**

Ecology and Environmental Biology Emphasis (Code 080-001); Microbiology Emphasis (Code 080-002); Biology, Liberal Arts (Code 080-203).

- **BIOL 221** Foundations of Biology I 4
- **BIOL 222** Foundations of Biology II 3
- **BIOL 223** Foundations of Biological Inquiry 2

**Total Credits** 9

**Core Requirements for Biology, Liberal Arts**

All students who pursue a Liberal Arts Comprehensive Major in Biology are also required to complete MATH 114, and CHEM 103 and CHEM 104, or CHEM 105, CHEM 106, and CHEM 109, or CHEM 115, in addition to the 60 credits required for the major.

**Biology, Ecology and Environmental Biology Emphasis, Comprehensive Major**

**Required Courses**

- **BIOL 180** Environmental Biology and Conservation 3
- or **GEOG 178** Conservation of the Environment
- **BIOL 321** Ecology 3
- **BIOL 323** Genetics 3
- **BIOL 383** Biostatistics 4

Field Experience may include:

- **BIOL 320** Studies in Tropical Environments
- **BIOL 329** Biological Field Experiences and Service-Learning Capstone
- **BIOL 423** Collaborative Research in Biology
- **BIOL 490** Biological Field Studies

Departmentally approved course offerings at a biological field station, an approved internship (BIOL 498), an approved field-intensive research experience (BIOL 499), or other approved experience may apply.

**Categorical Courses**

**Form and Function:**

At least one course from:

- **BIOL 318** Plant Form and Function

- **BIOL 319** Animal Form and Function
- **BIOL 324** Genetics Inquiry
- **BIOL 380** Endocrinology

**Organismal Diversity:**

At least two courses from:

- **BIOL 311** General Entomology
- **BIOL 325** Plant Systematics
- **BIOL 331** Trees and Shrubs
- **BIOL 332** Field Botany
- **BIOL 340** Ornithology
- **BIOL 345** Invertebrate Zoology
- **BIOL 356** Wisconsin Wildlife
- **BIOL 361** Biology of Microorganisms
- **BIOL 362** Field Zoology
- **BIOL 379** Biology of Fishes

**Ecology, Evolution, and Behavior:**

At least two courses from:

- **BIOL 308** Evolution
- **BIOL 328** Conservation Biology
- **BIOL 338** Vegetation Ecology
- **BIOL 365** Animal Behavior
- **BIOL 376** Aquatic Ecology

**Physical Sciences**

Select any 12 credits from the following course list. Up to 12 credits maximum will be applied toward the comprehensive major. 2

- **GEOG 270** Land Use Issues and Problems
- **GEOG 304** Introduction to Geomorphology
- **GEOG 335** Geographic Information Systems I
- **GEOG 336** Geospatial Field Methods
- **GEOG 337** Geographic Information Systems II
- **GEOG 338** Remote Sensing of the Environment
- **GEOG 350** Soils and the Environment
- **GEOG 361** Environmental Hazards
- **GEOG 363** Watershed Analysis
- **GEOG 435** Geographic Information Systems III
- **GEOG 438** Advanced Remote Sensing
- **GEOG 455** Web Geographic Information Systems
- **GEOL 110** Physical Geology
- or **GEOL 115** Environmental Geology
- **GEOL 301** Earth Resources
- **GEOL 304** Global Environmental Change
- **GEOL 308** Water Resources
- **GEOL 315** Hydrogeology I
- **PHYS 211** General Physics
- **PHYS 231** University Physics I
- **CHEM 213** Quantitative Analysis
- **CHEM 304** Environmental Chemistry
- **CHEM 325** Organic Chemistry I with Laboratory

1 May include Marine Science II - Marine Biology from the Gulf Coast Research Laboratory.
May include Marine Science I - Oceanography from the Gulf Coast Research Laboratory.