GEOLOGY, ENVIRONMENTAL SCIENCE EMPHASIS, COMPREHENSIVE MAJOR

Liberal Arts (Code 160-011)

University Requirements

GRADUATION REQUIREMENTS FOR BACCALAUREATE DEGREE

Credit Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum Total</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total for graduation</td>
<td>120</td>
<td>Certain programs exceed this minimum.</td>
</tr>
<tr>
<td>Upper division credits</td>
<td>39</td>
<td>See special requirements in each College.</td>
</tr>
<tr>
<td>Liberal Education Core</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Academic Concentrations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade Point Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Arts (Code 160-011)</td>
<td></td>
<td></td>
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</table>

Resident Grade Point Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum Total</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total for graduation</td>
<td>20.00 average</td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>20.00 average</td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td>20.00 average</td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>20.00 average</td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>20.00 average</td>
<td></td>
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</table>

University Residency Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum Total</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total for graduation</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Senior Year</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Major, Standard, upper division in residence</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Major, Comprehensive, upper division in residence</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

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

Satisfactory/Unsatisfactory

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
<th>Total Degree Credit</th>
<th>Major, Standard</th>
<th>Major, Comprehensive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>maximum 12</td>
<td>maximum 1</td>
<td>maximum 2 courses</td>
</tr>
</tbody>
</table>

Two-Year College Credits

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
<th>Total Degree Credit</th>
<th>Major or Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>maximum ¼ of total</td>
<td>maximum ½ of total</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
<th>Total KINS 100-184</th>
<th>Band, chorus, drama</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>maximum 1 credit</td>
<td>maximum 12 credits</td>
</tr>
</tbody>
</table>

Extension credits

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
<th>UW-System</th>
<th>Other extension/correspondence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no maximum</td>
<td>maximum ¼ of total</td>
</tr>
</tbody>
</table>

USAFI

<table>
<thead>
<tr>
<th>Credit Restrictions</th>
<th>USAFI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>maximum 32 credits</td>
</tr>
</tbody>
</table>

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.
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 five learning goals of our liberal education core and the 12 learning outcomes they comprise.

LIBERAL EDUCATION CORE REQUIREMENTS

Knowledge Goal

Knowledge Outcome 1 (K1): Natural Sciences (http://catalog.uwec.edu/undergraduate/attribute-k1/)  Two (2) learning experiences

One experience in laboratory science must be selected from either K1 or K2.

Knowledge Outcome 2 (K2): Social Sciences (http://catalog.uwec.edu/undergraduate/attribute-k2/)  Two (2) learning experiences

One experience in laboratory science must be selected from either K1 or K2.

Knowledge Outcome 3 (K3): Humanities (http://catalog.uwec.edu/undergraduate/attribute-k3/)  Two (2) learning experiences

Knowledge Outcome 4 (K4): Fine Arts (http://catalog.uwec.edu/undergraduate/attribute-k4/)  One (1) learning experience

Skills Goal

Skills Outcome 1 (S1): Written and Oral Communication (http://catalog.uwec.edu/undergraduate/attribute-s1/)  Two (2) learning experiences

One S1 must meet the University Writing Requirement (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header10)

Skills Outcome 2 (S2): Mathematics (http://catalog.uwec.edu/undergraduate/attribute-s2/)  One (1) learning experience

One S2 to meet the University Mathematics Requirement (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header11)

Skills Outcome 3 (S3): Creativity (http://catalog.uwec.edu/undergraduate/attribute-s3/)  One (1) learning experience

Responsibility Goal

Responsibility Outcome 1 (R1): Equity, Diversity, and Inclusivity (http://catalog.uwec.edu/undergraduate/attribute-r1/)  Two (2) learning experiences

One R1 must satisfy Design for Diversity (http://catalog.uwec.edu/undergraduate/attribute-DDIV/#header13)

Responsibility Outcome 2 (R2): Global Perspectives (http://catalog.uwec.edu/undergraduate/attribute-r2/)  One (1) learning experience

Responsibility Outcome 3 (R3): Civic and Environmental Issues (http://catalog.uwec.edu/undergraduate/attribute-r3/)  One (1) learning experience

Integration Goal

Integration Outcome 1 (I1): Integration (http://catalog.uwec.edu/undergraduate/attribute-i1/)  Two (2) learning experiences

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 160-011)**

The objective of the comprehensive major in geology is to prepare students for graduate programs in geological sciences or for careers as professional geologists, hydrogeologists, or geological engineers. The liberal arts comprehensive major requires completion of the Core and one of the four Emphases.

**NOTE:** Communication classes, both written and oral, are strongly recommended to fulfill liberal education requirements in any of the emphases.

### Core Requirements for all Liberal Arts Emphases in the Comprehensive Geology Major

**Code** | **Title** | **Credits**
--- | --- | ---
23-25 credits
Select one of the following: | 4
GEOL 106 | Earth Science | 
GEOL 110 | Physical Geology | 
GEOL 115 | Environmental Geology | 
GEOL 118 | Societal Issues in Earth Science | 
**Required:**
GEOL 312 | Mineralogy and Petrology I | 5
GEOL 320 | Sedimentology and Stratigraphy | 4
GEOL 468 | Computers in Geology | 1
GEOL 470 | Field Geology I | 3
CHEM 115 | Chemical Principles (or equivalent) | 6
Capstone Experience (required for all majors) | 0-2

For liberal arts majors, the capstone options may include: GEOL 395 (for a minimum of two credits) or GEOL 471. The capstone will consist of student selection of one of the following options: faculty/student collaborative research, preparation and presentation of a department seminar, internship, field experiences, or other approved experiences. Students working with their adviser will submit a proposal to the department faculty outlining their choice of the capstone experience and explicitly stating how the capstone fits into their personal career goals. The proposal for a capstone experience must be submitted to the chair of the department no later than the second week of the first semester of the senior year.

### Environmental Science Emphasis

Recommended for students who are interested in careers working in environmental fields, such as environmental geology, land conservation, and environmental policy, or who desire to attend graduate school in environmental science, environmental law, or resource planning.

This emphasis requires completion of the Comprehensive Geology Major Core plus the required and elective credits as listed below.

**Code** | **Title** | **Credits**
--- | --- | ---
GEOL 301 | Earth Resources and Sustainability | 3
or GEOL 304 | Global Environmental Change | 
GEOL 308 | Water Resources | 3
GEOL 315 | Hydrogeology I | 4
GEOL 345 | Geomorphology and Aerial Photography Interpretation | 3
or GEOL 420 | Glacial Geology | 
GEOL 452 | Responsible Mining Seminar | 1
GEOG 335 | Geographic Information Systems I | 3
ENV/GEOG 377 | U.S. Environmental and Sustainability Policy | 3
MATH 246 | Elementary Statistics | 4

**Electives**

Select three of the following elective courses. It is strongly recommended that students select one course from each of the Biology, Geography, and Chemistry course options. Students should work with a Geology faculty advisor to select the most suitable course combination.

**Biology:**
BIOL 321 | Ecology | 
BIOL 328 | Conservation Biology | 
BIOL 338 | Vegetation Ecology | 
BIOL 376 | Aquatic Ecology | 

**Geography:**
GEOG 337 | Geographic Information Systems II | 
GEOG 338 | Remote Sensing of the Environment | 
GEOG 350 | Soils and the Environment | 
GEOG 363 | Watershed Analysis | 

**Chemistry:**
CHEM 213 | Quantitative Analysis | 
CHEM 218 | Introduction to Inorganic Chemistry | 
CHEM 304 | Environmental Chemistry | 
CHEM 325 | Organic Chemistry I with Laboratory | 
GEOG 336 | Introduction to Geochemistry | 

Plus electives to total at least 60 credits selected from the following geology courses:

GEOL 313 | Mineralogy and Petrology II | 
GEOL 330 | Structural Geology | 
GEOL 416 | Hydrogeology II | 
GEOL 418 | Earth History | 

**NOTE 1:** All students are also required to complete MATH 114 in addition to the 60 credits required for the major.

**NOTE 2:** No degree credit may be earned under the Satisfactory/Unsatisfactory option in any required courses in a geology major or minor.