**BACHELOR OF SCIENCE - ENVIRONMENTAL SCIENCE**  
Environmental Chemistry Specialization  
2019-2020 Degree Plans

<table>
<thead>
<tr>
<th>University Core Requirements (43 Hours)</th>
<th>UHCL Course Title</th>
<th>TCCNS*</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications (6 hours):</td>
<td>WRIT 1301—Composition I <em>(Grade must be “C-” or better)</em></td>
<td>ENGL 1301</td>
<td>010</td>
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<td></td>
<td>WRIT 1302—Composition II <em>(Grade must be “C-” or better)</em></td>
<td>ENGL 1302</td>
<td>010</td>
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<tr>
<td>Mathematics (4* hours):</td>
<td>MATH 2413—Calculus I <em>(Grade must be “C-” or better)</em></td>
<td>MATH 2413</td>
<td>020</td>
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<td>*Three (3) hours of Calculus will count toward the University Core and one (1) hour will count toward the Major</td>
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<tr>
<td>Life and Physical Sciences (6 hours):</td>
<td>CHEM 1311—General Chemistry I <em>(lecture, Grade must be “C-” or better)</em></td>
<td>CHEM 1311</td>
<td>030</td>
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<tr>
<td></td>
<td>CHEM 1312—General Chemistry II <em>(lecture, Grade must be “C-” or better)</em></td>
<td>CHEM 1312</td>
<td>030</td>
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<tr>
<td>Language, Philosophy, and Culture (3 hours):</td>
<td>Choose ONE course from the core approved list</td>
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<tr>
<td>Creative Arts (3 hours):</td>
<td>Choose ONE course from the core approved list</td>
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<tr>
<td>U.S. History (6 hours):</td>
<td>HIST 1301—U.S. History I</td>
<td>HIST 1301</td>
<td>060</td>
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<tr>
<td></td>
<td>HIST 1302—U.S. History II</td>
<td>HIST 1302</td>
<td>060</td>
</tr>
<tr>
<td>Government/Political Science (6 hours):</td>
<td>POLS 2305—Federal Government</td>
<td>GOVT 2305</td>
<td>070</td>
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<td>POLS 2306—Texas Government</td>
<td>GOVT 2306</td>
<td>070</td>
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<tr>
<td>Social/Behavioral Science (3 hours):</td>
<td>Choose ONE course from the core approved list</td>
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<tr>
<td>Component Area Option (6 hours):</td>
<td>COMM 1315—Public Speaking</td>
<td>SPCH 1315</td>
<td>090</td>
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<td></td>
<td>PSYC 1100—Learning Frameworks</td>
<td>PSYC 1100</td>
<td>090</td>
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<tr>
<td></td>
<td>CHEM 1111—Lab General Chemistry I <em>(Grade must be “C-” or better)</em></td>
<td>CHEM 1111</td>
<td>090</td>
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<tr>
<td></td>
<td>CHEM 1112—Lab for General Chemistry II <em>(Grade must be “C-” or better)</em></td>
<td>CHEM 1112</td>
<td>090</td>
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</tbody>
</table>

### Major Requirements (36 hours)

*Required minimum grade is “C-” in the following classes:*

- WRIT 3315—Advanced Technical Writing
- PHYS 1301/1101—College Physics I & Lab
- PHYS 1302/1102—College Physics II & Lab
- STAT 3308—Computational Statistics
- CHEM 2323/2123—Organic Chemistry I & Lab
- ENSC 2230—Environmental Science Seminar
- ENSC 3332/CHEM 3333—Environmental Chemistry
- ENSC 3331/BIOL 3333—Environmental Biology
- ENSC 3333/GEOL 3333—Environmental Geology
- ENSC 4130—Environmental Science Seminar II
- ENSC 4332—Advanced Environmental Science
- ENSC 4315, ENSCI 4379, or ENSC 4389  
  Environmental Science Practicum, Internship in Environmental Science, or Independent Study in Environmental Science

### Specialization Requirements (32 hours)

*Required minimum grade is “C-” for all Specialization Requirements*

- CHEM 2325/2125—Organic Chemistry II & Lab
- CHEM 3320—Survey of Physical Chemistry
- CHEM 4268—Instrumental Analysis Lab
Specialization Requirements (32 hours, continued)

- CHEM 4367—Instrumental Analysis
- ENSC 3301—Energy & the Environment
- ENSC 4251—Lab for Environmental Analysis
- ENSC 4355—Environmental Sampling and Monitoring
- ENSC 4356—Soil and Groundwater Remediation
- ENSC 4352—Water Chemistry and Water Pollution
- ENSC 4323—Soils in the Environment
- ENSC 4333—Introduction to Environmental Engineering

Specialization Electives (9 hours)

*Required minimum grade is “C-” for all Specialization Electives*

Specialization electives are junior or senior level science or related classes. Choose from: CHEM 4373, 4274, 4371; GEOL 3317/3117, 4326; ENSC 3307, 3331, 4325, 4355, 4351, 4389, 4391.

General Degree Requirements

- Students must complete at least 120 semester credit hours. A minimum of 45 hours of the 120 semester hours must be advanced (3000-4000 level) course work according to the requirements of the respective major.
- Students must complete the University Core Curriculum requirements (refer to Core Curriculum Requirements section of this catalog).
- Students must fulfill the statutory requirements of the Texas State Education Code, including the following:
  - Six hours of U.S. History (three hours may be Texas History).
  - Six hours of Constitutions of the United States and Texas.
- Students must demonstrate writing proficiency by completing nine hours of lower-level (1000-2000 level) and upper-level (3000-4000 level) English composition course credit with a minimum grade of “C-” or better. Some majors may require higher grades in English composition.
- Students must complete at least 25% of the credit hours required for the degree (i.e., 30 semester credit hours for a 120 credit hour program) through instruction offered by UHCL to fulfill the Southern Association of Colleges and Schools (SACS) residency requirements.
- Students must complete the final 30 semester hours of 3000 and 4000 level course work in residence at UHCL.
- Students must complete a minimum of 12 semester credit hours of upper-level (3000-4000 level) coursework in the major in residence at UHCL.
- Students must have a cumulative GPA of 2.000 on course work completed at UHCL with grades of “C” or better on at least 30 hours of resident upper-level work. Grades of “C-” or below cannot be applied toward the 30 hours of resident upper-level work.