CIVIL ENGINEERING: ENVIRONMENTAL, BSCV

Requirements for Students Matriculating in or before Academic Year 2023-2024. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 128

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
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<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1213</td>
<td>Composition II</td>
<td></td>
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<tr>
<td>or ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
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</tbody>
</table>

American History & Government

Select one of the following: 3
- HIST 1103  Survey of American History
- HIST 1483  American History to 1865 (H)
- HIST 1493  American History Since 1865 (DH)

POLS 1113  American Government 3

Analytical & Quantitative Thought (A)

MATH 2144  Calculus I (A) 4
MATH 2153  Calculus II (A) 3

Humanities (H)

Courses designated (H) 6

Natural Sciences (N)

Must include one Laboratory Science (L) course.

CHEM 1414  General Chemistry for Engineers (LN) 1 4
or CHEM 1314  Chemistry I (LN)

Select four hours from the following: 4
- BIOC 2344  Chemistry and Applications of Biomolecules
- BIOL 1114  Introductory Biology (LN)
- BIOL 1113 & BIOL 1111  Introductory Biology (N) and Introductory Biology Laboratory (LN)
- PHYS 2014  University Physics I (LN)

Social & Behavioral Sciences (S)

SPCH 2713  Introduction to Speech Communication (S) 3

Hours Subtotal 40

Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan.
Select at least one Diversity (D) course
Select at least one International Dimension (I) course

College/Departmental Requirements

Mathematics

MATH 2163  Calculus III 3

Basic Science

Select one of the following options: 5

PHYS 2114 & CIVE 2081  University Physics II (LN) and Environmental Chemistry for Engineers

or

CHEM 1515  Chemistry II (LN)

Engineering

ENGR 1111  Introduction to Engineering 1
ENGR 1322  Engineering Design with CAD 2
ENGR 1412  Introductory Engineering Computer Programming 2

Engineering Science

ENSC 2113  Statics 3
ENSC 2123  Elementary Dynamics 3
ENSC 2143  Strength of Materials 3
ENSC 2141  Strength of Materials Lab 1

Civil Engineering

CIVE 2041  Civil and Environmental Engineering Seminar 1
CIVE 3614  Engineering Surveying 4
CIVE 3813  Environmental Engineering Science 3

Hours Subtotal 31

Major Requirements

Mathematics

MATH 2233  Differential Equations 3

Engineering Science

ENSC 3233  Fluid Mechanics 3
ENSC 3231  Fluids and Hydraulics Lab 1

Civil Engineering

CIVE 3413  Structural Analysis 3
CIVE 3523  Reinforced Concrete Design 3
CIVE 3853  Environmental Engineering Laboratory 3
CIVE 3623  Engineering Materials Laboratory 3
CIVE 3633  Transportation Engineering 3
CIVE 3714  Introduction to Geotechnical Engineering 4
CIVE 3833  Applied Hydraulics 3
CIVE 3843  Hydrology I 3
CIVE 4041  Engineering Practice 1
CIVE 4143  Environmental Engineering Design 3
CIVE 4273  Construction Engineering and Project Management 3
CIVE 4833  Unit Operations in Environmental Engineering 3

Industrial Engineering & Management

IEM 3503  Engineering Economic Analysis 3

Hours Subtotal 48

Electives

Select 9 hours of the following: 9
CIVE 4010  Civil Engineering Research
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CIVE 4013</td>
<td>Aquatic Chemistry</td>
</tr>
<tr>
<td>CIVE 4033</td>
<td>GIS Applications for Water Resources</td>
</tr>
<tr>
<td>CIVE 4050</td>
<td>Special Topics in Civil &amp; Environmental Engineering</td>
</tr>
<tr>
<td>CIVE 4123</td>
<td>The Legal &amp; Regulatory Environment of Civil Engineering</td>
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<tr>
<td>CIVE 4243</td>
<td>Use and Design of Geosynthetics</td>
</tr>
<tr>
<td>CIVE 4863</td>
<td>Advanced Unit Operations in Environmental Engineering</td>
</tr>
<tr>
<td>CIVE 4873</td>
<td>Air Pollution Control Engineering</td>
</tr>
<tr>
<td>CIVE 4883</td>
<td>Introduction to Environmental Modeling</td>
</tr>
<tr>
<td>CIVE 4913</td>
<td>Groundwater Hydrology</td>
</tr>
<tr>
<td>CIVE 4923</td>
<td>Environ Risk Assessment</td>
</tr>
<tr>
<td>CIVE 4933</td>
<td>Water Treatment</td>
</tr>
<tr>
<td>CIVE 4943</td>
<td>Risk and Failure Analysis of Dams</td>
</tr>
<tr>
<td>CIVE 4963</td>
<td>Open Channel Flow</td>
</tr>
<tr>
<td>CIVE 4983</td>
<td>Residuals &amp; Solid Waste Management</td>
</tr>
</tbody>
</table>

ENGR 4043 or ENGR 4060 may be used for one CIVE elective.

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<thead>
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CHEM 1515 fulfills the requirements for both CHEM 1414 and CIVE 2081.

**Graduation Requirements**

1. A minimum 2.00 Technical GPA. The technical GPA is calculated from all courses counting in the curriculum with a prefix belonging to the degree program, or substitutions for these courses.

2. If "B" or higher is not earned in ENGL 1113 Composition I, then ENGL 1213 Composition II must be completed.

3. A "C" or better is required in all CIVE, ENSC, and Math prefixed courses required in the degree.

4. The major engineering design experience, capstone course, is satisfied by CIVE 4143 Environmental Engineering Design.

**Additional State/OSU Requirements**

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.

- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.

- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.

- Degrees that follow this plan must be completed by the end of Summer 2029.