# Bachelor of Science in Environmental Engineering (BSENVE)

## Prerequisite & General Education Courses

### Mathematics
- MATH 124, 125, and 126 (Calculus with Analytic Geometry) (15 cr)
- AMATH 351 Applied Diff’l Equations (3 cr)
- AMATH 352 Matrix Algebra (3 cr)
- IND E 315* Prob & Stats for Engrs (3 cr)

### Sciences
- BIOL 180 Intro Biology (5 cr)
- CHEM 142 General Chemistry (5 cr)
- CHEM 152 General Chemistry (5 cr)
- CHEM 162 General Chemistry (5 cr)
- PHYS 121 Mechanics (5 cr)
- PHYS 122 Elect-Mag & Osc (5 cr)
- PHYS 123 Waves (5 cr)

### Engineering Fundamentals
- AMATH 301 Beg Sci Computing or CSE 142 Computer Programming I (4 cr)
  Note: AMATH 301 preferred
- AA 210 Statics (4 cr)
- CEE 220 Mechanics of Materials (4 cr)
- AA 260 Thermodynamics (4 cr)
  (or ME 323 Engr Thermodynamics)

### Economics
- IND E 250 Engr Econ (4 cr) or ECON 200 (5 cr)

### Written Communication
- English Composition (5 cr)
- ENGR 231 Intro to Technical Writing (3 cr)
  Additional Composition or Writing (4 cr)

### Areas of Knowledge
- Visual, Literary, & Perf. Arts (VLPA) (10 cr)
- Individuals & Society (I&S) (10 cr)
- Additional VLPA or I&S (4 cr)

### Diversity
- One course from UW’s approved diversity list.
  Can also count as VLPA/I&S if course is designated as such.

### Upper-Division Coursework

#### CEE Junior Year Courses
- CEE 347 Intro to Fluid Mechanics (5 cr)
- CEE 348 Hydrology & Environmental Fluid Mechanics (4 cr)
- CEE 349 Case Studies in Envr Engineering (3 cr)
- CEE 350 Mass and Energy Balances in Environmental Engineering (4 cr)
- CEE 352 Intro Microbial Principles in Environmental engineering (5 cr)
- CEE 354 Envr Engineering Applications (5 cr)
- CEE 356 Quantitative & Conceptual Tools for Sustainability (4 cr)

#### CEE Senior Year Courses

##### Professional Practice and Capstone
- CEE 440 Professional Practice (2 cr)
- Capstone Design Course (5 cr)
  Choice of CEE 444 (Water) or 445 (Envr)

##### Technical Electives
- 400-level CEE courses. See Technical Electives Course list (page 2).

##### Upper-Division Engineering and Science
- Select courses from within CEE or from approved list of non-CEE courses. A list of courses that are pre-approved is available from the advisors. Students may petition to have courses added to the list.

##### General Electives
- Additional credits to meet the 180 total required for the baccalaureate degree.

*Designates admission prerequisites (for transfer students and UW interest changers.) A minimum grade of 2.0 is required in each prerequisite course, and a minimum cumulative GPA of 2.5 is required.

**Notes:**
- MATH 307/308 may be substituted for AMATH 351/352.
- STAT 390 may be substituted for IND E 315.
- ECON 200 satisfies Economics and I&S requirement.

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The BSENVE program, launched in autumn 2017, will be eligible for accreditation review by the Engineering Accreditation Commission of ABET ([www.abet.org](http://www.abet.org)) in 2019.

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**BSEnvE SAMPLE 4-YEAR PLAN:**

### Sample Freshman Year

<table>
<thead>
<tr>
<th>Autumn</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 124 5</td>
<td>MATH 125 5</td>
<td>MATH 126 5</td>
</tr>
<tr>
<td>CHEM 142 5</td>
<td>CHEM 152 5</td>
<td>CHEM 162 5</td>
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<tr>
<td>ENGL Comp 5</td>
<td>VLPA/I&amp;S 5</td>
<td>PHYS 121 5</td>
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### Sample Sophomore Year

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<tbody>
<tr>
<td>AMATH 301 4</td>
<td>AMATH 351 3</td>
<td>AMATH 352 3</td>
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<tr>
<td>PHYS 122 5</td>
<td>PHYS 123 5</td>
<td>BIOL 180 5</td>
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<tr>
<td>AA 210 4</td>
<td>CEE 220 4</td>
<td>AA 260 4</td>
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<td>electives 2</td>
<td>VLPA/I&amp;S 3</td>
<td>VLPA/I&amp;S 3</td>
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<td><strong>Total 15</strong></td>
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### Sample Junior Year

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<tbody>
<tr>
<td>CEE 349 3</td>
<td>CEE 347 5</td>
<td>CEE 348 5</td>
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<tr>
<td>CEE 350 4</td>
<td>CEE 354 5</td>
<td>CEE 356 5</td>
</tr>
<tr>
<td>CEE 352 5</td>
<td>ENGR 231 3</td>
<td>Tech Elec 3</td>
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<tr>
<td>IND E 315 3</td>
<td>elective 2</td>
<td>IND E 250 4</td>
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<td><strong>Total 15</strong></td>
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### Sample Senior Year

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<th>Winter</th>
<th>Spring</th>
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<tbody>
<tr>
<td>Tech Elec 3</td>
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<td>Capstone 5</td>
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<tr>
<td>Tech Elec 3</td>
<td>Tech Elec 3</td>
<td>Tech Elec 3</td>
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<tr>
<td>UD Elec 3</td>
<td>UD Elect 4</td>
<td>UD Elec 3</td>
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<tr>
<td>VLPA/I&amp;S 5</td>
<td>VLPA/I&amp;S 5</td>
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<td><strong>Total 14</strong></td>
<td><strong>Total 14</strong></td>
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**ADMISSION INFORMATION**

**TRANSFER STUDENTS AND INTEREST CHANGERS:**
- Designates admission prerequisites. Minimum grade of 2.0 is required in each class. A cumulative GPA of 2.5 is required. See BSEnvE website for transfer and admission information.

**Transfer students** must apply for **UW Admissions** by February 15 and submit the online engineering application by April 5 for autumn quarter admission.

**Transfer students seeking course substitutions should be prepared to present course descriptions and syllabi.**

**DIRECT TO COLLEGE ENGINEERING STUDENTS:**
Engineering Undeclared students are admitted to the major by placement. See website for more information.

The BSEnvE junior year curriculum begins in autumn quarter each year. The 300-level CEE courses are designed to be completed in sequence during the academic year.

**TECHNICAL ELECTIVES: CORE COURSES LIST**
Select courses from any of the following. **Thematic areas are shown to help guide selection.**

**Engineered Systems and Processes**
- CEE 482 WW Reuse and Resource Rec (3)
- CEE 483 Drinking Water Treatment (3)
- CEE 484 Decentralized WW Treatment (3)
- CEE 487 Solid Waste Management (3)
- CEE 488 Hazardous Waste Eng. (3)
- CEE 490 Air Pollution Control (3)
- CEE 497 Water in an Arid Land (5)

**Natural Systems and Processes**
- CEE 462 Limnology (3)
- CEE 480 Air Quality Modeling (3)
- CEE 485 Environmental Chemistry (3)
- CEE 496 Chemical Fate and Transport (3)
- CEE 498 Micro of Earth and Human Sys (3)
- CEE 498 Environmental Analyses (4)
- CEE 498 Advanced Remote Sensing (4)

**Hydrology and Hydrodynamics**
- CEE 473 Coastal Engineering (3)
- CEE 474 Hydraulics of Sed. Transport (3)
- CEE 475 Groundwater Flow (3)
- CEE 476 Physical Hydrology (3)
- CEE 477 Open Channel Flow (3)
- CEE 481 Hydraulic Design for Env Eng (3)

**NOTE:**
- For VLPA and I&S, see UW Areas of Knowledge on Web
- Tech Elec = CEE Technical Electives (required)
- UD Elec = CEE Upper Division Science & Engr Electives (required)

**RESOURCES:**
- BSEnvE webpage [www.ce.washington.edu](http://www.ce.washington.edu)
- UW Admissions [admit.washington.edu](http://admit.washington.edu)
- UW College of Engineering [www.engr.washington.edu](http://www.engr.washington.edu)