

## BACHELOR OF SCIENCE IN ENVIRONMENTAL ENGINEERING (BSENVE)

### PREREQUISITE & GENERAL EDUCATION COURSES

#### Mathematics **24 cr**

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

#### Sciences **35 cr**

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

#### Engineering Fundamentals **16 cr**

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

#### Economics **4-5 cr**

- IND E 250 Engr Econ (4) *or* ECON 200 (5)

#### Written Communication **12 cr**

- ◇ English Composition (5)
- ENGR 231 Intro to Technical Writing (3)
- Additional Composition or Writing (4)

#### Areas of Knowledge **24 cr**

- Visual, Literary, & Perf Arts (VLPA) (10)
- Individuals & Society (I&S) (10)
- Additional VLPA or I&S (4)

#### Diversity **3 cr**

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

*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.*

### UPPER-DIVISION COURSEWORK

#### CEE Junior Year Courses **30 cr**

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

#### CEE Senior Year Courses

#### Professional Practice and Capstone **7 cr**

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

#### Technical Electives **15 cr**

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

#### Upper-Division Engineering and Science **13 cr**

*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.*

#### **Transfer Students & UW Interest Changers**

*(DTC students: Consult with your adviser for DTC placement reqs.)*

◇ **Application Requirements** – must be completed by time of application (April 5)

◆ **Enrollment Requirements** – must be complete prior to enrollment in major.

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.

**BSEnVE SAMPLE 4-YEAR PLAN:**

**Sample Freshman Year**

Autumn		Winter		Spring	
MATH 124	5	MATH 125	5	MATH 126	5
CHEM 142	5	CHEM 152	5	CHEM 162	5
ENGL Comp	5	VLPA/I&S	5	PHYS 121	5
ENGR 101	2	CEE 102	1	CEE 103	1
Total	17	Total	16	Total	16

**Sample Sophomore Year**

Autumn		Winter		Spring	
AMATH 301	4	AMATH 351	3	AMATH 352	3
PHYS 122	5	PHYS 123	5	BIOL 180	5
AA 210	4	CEE 220	4	AA 260	4
VLPA/I&S/DIV	3	VLPA/I&S	3	VLPA/I&S	3
Total	16	Total	15	Total	15

**Sample Junior Year**

Autumn		Winter		Spring	
CEE 349	3	CEE 347	5	CEE 348	4
CEE 350	4	CEE 354	5	CEE 356	4
CEE 352	5	ENGR 231	3	Tech Elec	3
IND E 315	3	elective	2	IND E 250	4
Total	15	Total	15	Total	15

**Sample Senior Year**

Autumn		Winter		Spring	
Tech Elec	3	CEE 440	2	Capstone	5
Tech Elec	3	Tech Elec	3	Tech Elec	3
UD Elec	3	UD Elect	4	UD Elec	3
VLPA/I&S	5	VLPA/I&S	5	UD Elec	3
Total	14	Total	14	Total	14

*Additional credits as desired or needed*

**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 (for prospective & current students)**  
[www.ce.washington.edu/future/undergrad/environmental](http://www.ce.washington.edu/future/undergrad/environmental)  
[www.ce.washington.edu/current/undergrad/environmental](http://www.ce.washington.edu/current/undergrad/environmental)

**UW Admissions**  
[admit.washington.edu/](http://admit.washington.edu/)

**UW College of Engineering**  
[www.engr.washington.edu/](http://www.engr.washington.edu/)

**UW Course Equivalencies for WA St Comm Colleges**  
[admit.washington.edu/apply/transfer/equivalency-guide/](http://admit.washington.edu/apply/transfer/equivalency-guide/)

**CEE Add Code Request Form**  
<http://tinyurl.com/ceaddcoderequest>

**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 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 496 Chemical Fate and Transport (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)