



## BACHELOR OF SCIENCE IN CIVIL ENGINEERING (BSCE)

## PREREQUISITE &amp; GENERAL EDUCATION COURSES

**Mathematics** 24 cr

- ◇ MATH 124, 125, and 126 (15)  
Calculus with Analytic Geometry
- MATH 307 Differential Equations (3)
- ◆ MATH 308 Matrix Algebra (3)
- IND E 315 Prob & Stats for Engineers (Preferred), or STAT 390 (3-4)

**Sciences** 25+ cr

- ◇ CHEM 142 General Chemistry (5)
- CHEM 152 General Chemistry (5)
- ◇ PHYS 121 Mechanics (5)
- ◇ PHYS 122 Elect-Mag & Osc (5)
- PHYS 123 Waves (5)

*New!* Additional Science (*see UD Engr & Science list*)

**Engineering Fundamentals** 20 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)
- ◆ ME 230 Kinematics & Dynamics (4)  
One course additional course from: (4)  
*ME 123, MSE 170, EE 215, IND E 250, AA 260, and IND E 315\*. (Students who take IND E 315 may apply any non-statistics, non-teaching 300-level MATH course towards the mathematics requirement.)*

**Written Communication** 12 cr

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

**Economics** CEE topic requirement

- ECON 200 or 201 (5) or IND E 250 (4)  
*IND E 250 also counts as Engr Fundamentals above.*  
*ECON 200 also counts as I&S below.*

**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 BSCE program is accredited by the Engineering Accreditation Commission of ABET  
<http://www.abet.org>.*

## UPPER DIVISION COURSEWORK

The BSCE degree covers six areas of interest (**construction, transportation, geotechnical, structural, water, and environmental engineering**). The 300-level curriculum provides a foundation in all areas and is typically completed in the junior year in a pre-arranged sequence of courses, called Track I or II. (See back for more information.) In the senior year, students can explore their areas of interest as they select courses to meet Technical Elective and Upper-Division Engineering & Science Elective requirements. Seniors also complete a spring capstone design course in an engineering area of their choice (e.g., Construction/Transportation, etc.).

**CEE Junior Year Courses (40 cr)**

- CEE 307 Construction Engineering (5)
- CEE 317 GeoSurveying (5)
- CEE 327 Transportation Engineering (5)
- CEE 337 Construction Materials (5)
- CEE 347 Intro to Fluid Mechanics (5)
- CEE 357 Environmental Engineering (5)
- CEE 367 Geotechnical Engineering (5)
- CEE 377 Intro to Structural Design (5)

**CEE Senior Year Courses****Professional Practice and Capstone** 7 cr

- CEE 440 Professional Practice (2)
- Capstone Design Course (5)  
*Choice of CEE 441, 442, 444 or 445*

**Technical Electives** 15 cr

*Three "core" courses, each one selected from a different category of departmental emphasis. See "Core Courses" list on page 2 (also available on the CEE website). Complete additional 400-level CEE courses, not used to fulfill other requirements, for a total of 15 credits.*

**Upper-Division Engineering and Science** 12 cr

Choose any additional CEE 400-level courses (not used elsewhere) and courses from the approved list of non-departmental courses, or as approved by petition. **Must include one approved science course from UD E&S 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)*

- ◇ **Application Requirements** – must be completed by time of application (April 5)
- ◆ **Enrollment Requirements** – must be complete prior to enrollment in major.

**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	PHYS 121	5
ENGL Comp	5	VLPA/IS	5	VLPA/IS	5
ENGR 101	2	CEE 101/ 102	1	CEE 103	1
Total	17	Total	16	Total	16

**Sample Sophomore Year**

Autumn		Winter		Spring	
MATH 308	3	MATH 307	3	IND E 315	3
PHYS 122	5	PHYS 123	5	AMATH301	4
AA 210	4	CEE 220	4	ME 230	4
IND E 250 (or ECON 200)	4	ENGR 231	3	VLPA/IS	4
Total	16	Total	15	Total	15

**Sample CEE Junior Year (Students take Track I or II)**

Autumn		Winter		Spring	
<i>Track I</i>					
CEE 317	5	CEE 307	5	CEE 327	5
CEE 337	5	CEE 347	5	CEE 367	5
CEE 377	5	CEE 357	5	CEE 4xx, grad req, or other elective	5
Total	15	Total	15	Total	15
<i>Track II</i>					
CEE 307	5	CEE 327	5	CEE 337	5
CEE 317	5	CEE 367	5	CEE 357	5
CEE 347	5	CEE 377	5	CEE 4xx or grad reqmt, or other elective	5
Total	15	Total	15	Total	15

**Sample CEE Senior Year**

Autumn		Winter		Spring	
Tech Elec	3	CEE 440	2	Capstone	5
Tech Elec	3	Tech Elec	3	Tech Elec	3
Tech Elec	3	UD / Science	5	Electives	5
UD Elect	3	UD Elect	4		
<i>Additional credits as desired or needed</i>					

**Notes:**

- Tech Elec = CEE Technical Electives (required)
- UD Elec = CEE Upper Division Engineering & Science Electives (required)
- AMATH 351/352 may be substituted for MATH 307/308.
- IND E 315 may be counted as either a Math class or Engineering Fundamental, but not both.
- Q SCI 381 may satisfy your statistics requirement.
- For VLPA and I&S, see UW Areas of Knowledge on Web

**ADMISSIONS:**

The CEE program admits students once a year for autumn quarter only. See the CEE website for detailed application information and link to the online form.

**Transfer students** must also submit a UW admissions application for autumn. See UW Admissions for more information. *Transfer students seeking course substitutions should be prepared to present a course description and syllabus.*

**RESOURCES:**

**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/ceeaddcoderequest>

**TECHNICAL ELECTIVES: CORE COURSES LIST**

**Construction Core**

- CEE 404 Infrastructure Construction (4)
- CEE 420 Engineering With Developing Communities (3) DIV
- CEE 421 Pavement Design and Construction (4)
- CEE 424 GIS for Civil Engineers (3)
- CEE 429 Sustainability in Building Infrastructure (3)

**Transportation Core**

- CEE 410 Traffic Engr Fundamentals (3)
- CEE 412 Transportation Data Mgmt (3)
- CEE 416 Urban Transportation Planning & Design (3)

**Geotechnical Core**

- CEE 436 Foundation Design (3)

**Structural core**

- CEE 451 Design of Metal Structures (3)
- CEE 452 Design Reinforced Concrete Structures (3)
- CEE 453 Prestressed Concrete Design (3)
- CEE 454 Design Timber Structures (3)
- CEE 455 Structural Unit Masonry (3)
- CEE 456 Structural Analysis (5)
- CEE 457 Advanced Structures I (3)

**Water Core**

- CEE 473 Coastal Engineering (3)
- CEE 474 Hydraulics of Sediment Transp (3)
- CEE 475 Analysis Techniques for Groundwater Flow (3)
- CEE 476 Physical Hydrology (3)
- CEE 477 Open-Channel Engr (3)
- CEE 491 Deterministic Systems (3)

**Environmental Core**

- CEE 462 Applied Limnology and Pollutant Effects (3)
- CEE 480 Air-Quality Modeling (3)
- CEE 481 Hydraulic Design for Env'l Engr (3)
- CEE 482 Wastewater Reuse & Resource Recovery (3)
- CEE 483 Drinking Water Treatment (3)
- CEE 496 Fate and Transport of Chemicals in the Envr (3)
- CEE 490 Air-Pollution Control (4)

**NEW! Additional science course (not chemistry or physics) required for graduation. See Upper Division Engr & Science List for approved science courses:**  
[www.ce.washington.edu/current/undergrad/civil/upper/ec/nondep](http://www.ce.washington.edu/current/undergrad/civil/upper/ec/nondep)