BACHELOR OF SCIENCE IN CIVIL ENGINEERING (BSCE)

PREREQUISITE & 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 CSE 142 Computer Programming I (4)
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.

www.ce.washington.edu ● 201 More Hall, Box 352700, Seattle, WA 98195 ● Phone 206-543-5092 ● ceadvice@uw.edu
## Bachelor of Science in Civil Engineering (BSCE) Program

### Sample 4-Year Plan:

#### Sample Freshman Year

<table>
<thead>
<tr>
<th>Autumn</th>
<th>Winter</th>
<th>Spring</th>
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<tbody>
<tr>
<td>MATH 124</td>
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<td>MATH 126</td>
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<tr>
<td>CHEM 142</td>
<td>5</td>
<td>PHYS 121</td>
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<tr>
<td>ENGL Comp</td>
<td>5</td>
<td>VLP A/IS</td>
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<tr>
<td>ENGR 101</td>
<td>2</td>
<td>CEE 101/102</td>
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<td>Total 17</td>
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#### Sample Sophomore Year

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<tr>
<td>MATH 308</td>
<td>3</td>
<td>IND E 315</td>
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<tr>
<td>PHYS 122</td>
<td>5</td>
<td>AMATH 301</td>
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<tr>
<td>AA 210</td>
<td>4</td>
<td>ME 230</td>
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<tr>
<td>IND E 250</td>
<td>4</td>
<td>VLP A/IS</td>
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<td>(or ECON 200)</td>
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#### Sample CEE Junior Year (Students take Track I or II)

**Track I**

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<tr>
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<tbody>
<tr>
<td>CEE 317</td>
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<td>CEE 327</td>
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<tr>
<td>CEE 337</td>
<td>5</td>
<td>CEE 367</td>
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<tr>
<td>CEE 377</td>
<td>5</td>
<td>CEE 4xx, grad req, or other elective</td>
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**Track II**

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<td>CEE 307</td>
<td>5</td>
<td>CEE 337</td>
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<tr>
<td>CEE 317</td>
<td>5</td>
<td>CEE 357</td>
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<tr>
<td>CEE 347</td>
<td>5</td>
<td>CEE 4xx or grad req, or other elective</td>
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#### Sample CEE Senior Year

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<tbody>
<tr>
<td>Tech Elec</td>
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<td>Capstone</td>
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<tr>
<td>Tech Elec</td>
<td>3</td>
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<td>3</td>
<td>Electives</td>
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<tr>
<td>UD Elect</td>
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<td>UD Elect</td>
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Additional credits as desired or needed

### 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 VLP A and I&S, see UW Areas of Knowledge on Web**

### 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**
- **CEE Add Code Request Form**
  - [http://tinyurl.com/ceeaddcoderequest](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'I Engr (3)
- CEE 482 WastewaterReuse & Resource Recovery (3)
- CEE 483 Drinking Water Treatment (3)
- CEE 496 Fate and Transport of Chemicals in the Env (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/req nondep](http://www ce washington.edu/current/undergrad/civil/upper/req nondep)