



OFFICE OF THE PRESIDENT

January 17, 2013

Interim Dean Judith Ramey
College of Engineering
Box 352180

Dear Judy:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of the revised program requirements for the Bachelor of Science in Civil Engineering degree. A copy of the change is attached.

I am writing to inform you that the College of Engineering is authorized to specify these requirements beginning autumn quarter 2012.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

A handwritten signature in black ink, reading 'Michael K. Young'.

Michael K. Young
President

Enclosure

cc: Dr. Greg Miller (with enclosure)
Ms. Mariko Navin (with enclosure)
Mr. Robert Corbett (with enclosure)
Dr. Deborah H. Wiegand (with enclosure)
Ms. Virjean Edwards (with enclosure CEE-20121015)



UNIVERSITY OF WASHINGTON

**CREATING AND CHANGING UNDERGRADUATE
ACADEMIC PROGRAMS**

OCT 19 2012

OFFICE USE ONLY

Control #

CEE-2012/015

After college/school/campus review, send a signed original and 1 copy to the Curriculum Office/FCAS, Box 355850.

For information about when and how to use this form: <http://depts.washington.edu/uwcr/1503instructions.pdf>**College/Campus** Engineering (Seattle)**Department/Unit** Civil & Envr Engineering**Date** Oct. 15, 2012**New Programs**

- ☐ Leading to a Bachelor of ____ in ____ degree.
- ☐ Leading to a Bachelor of ____ degree with a major in ____.
- ☐ Leading to a ____ Option within the existing major in ____.
- ☐ Leading to a minor in ____.

Changes to Existing Programs

- ☐ New Admission Requirements for the Major in ____ within the Bachelor of ____.
- ☐ Revised Admission Requirements for the Major in ____ within the Bachelor of ____.
- ☒ Revised Program Requirements for the Bachelor of Science in Civil Engineering.
- ☐ Revised Requirements for the Option in ____ within the major in ____.
- ☐ Revised Requirements for the Minor in ____.

Other Changes

- ☐ Change name of program from ____ to ____.
- ☐ New or Revised Continuation Policy for ____.
- ☐ Eliminate program in ____.

Proposed Effective Date: **Quarter:** ☒ Autumn ☐ Winter ☐ Spring ☐ Summer **Year: 20 12__****Contact Person:** Greg Miller**Phone:** 3-0350**Email:** gmiller@uw.edu**Box:** 352700**EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE**

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (Use additional pages if necessary).

Please see attached.

- 300-level curriculum change overview, rationale, and justification by Chair (Greg Miller). Reduction in required credits at the 300-level from 45 credits to 40 credits will be offset by:
 - increase in Capstone course credits (CEE 441, 442, 444, and 445) from 4 to 5 credits (Paperwork will be forthcoming)
 - increase in Upper Division Engineering and Science credits from 9 to 12 credits (including up to 4 credits of faculty-approved Co-op credits to count towards the UD Electives).
 - Replace CEE 363W with "W" or "C" credits
- Old & revised BSCE degree handouts, with sample 4-Year plan.

OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

Department/Unit:

Chair/Program Director:

Date:

Department/Unit:

Chair/Program Director

Date:

CATALOG COPY

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

Major Requirements (94-97 credits)

- a. *Engineering Fundamentals (19 credits)*: AMATH 301 or CSE 142, A A 210, CEE 220, and ME 230. Students who complete STAT 390 must complete an additional Engineering Fundamentals course from CHEM E 260, IND E 250, IND E 280, M E 123, or MSE 170. Students who complete IND E 315 must complete either an additional Engineering Fundamentals course from the above list, or an additional 300-level math course other than statistics.
- b. *Civil Engineering Core (45-48 credits)*: CEE 306, CEE 316, CEE 320, CEE 342, CEE 345, CEE 350, CEE 360, CEE 363, CEE 366, CEE 379, CEE 380, CEE 391, either AMATH 301 or CEE 392.
- c. *Professional Practice and Capstone Design (6 credits)*: CEE 440 and one course from CEE 441, CEE 442, CEE 444, or CEE 445. Minimum grade of 2.0 required for both courses in this two-course sequence.
- d. *Civil Engineering Technical Electives (15 credits)*: Minimum 12 credits of CEE 400-level coursework selected from an approved list (see adviser or department Website for list), with at least one core course from four separate areas of concentration within the department, plus any additional CEE 400-level course (except CEE 423 and courses taken to fulfill requirement c, above). Minimum grade of 2.0 required for each of the four courses used to fulfill the core courses requirement.
- e. *Upper- Division Engineering and Science (9-credits)*: Choice of additional CEE 400-level courses or courses from an approved list from outside the department.

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications).
Please note: all copy will be edited to reflect uniform style in the General Catalog.

Please see attached.

APPROVALS

Chair/Program Director:

[Signature]

Date:

10/15/12

College/School/Campus Curriculum Committee:

[Signature]

Date:

10-16-12

Dean/Vice Chancellor:

[Signature]

Date:

10-17-12

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:

[Signature]

Date:

10/17/12

POST TRI-CAMPUS APPROVAL (when needed)

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:

Date:

PROPOSED CATALOG COPY

Major Requirements (94-97 credits)

- a. Engineering Fundamentals (20 credits): AMATH 301 or CSE 142, A A 210, CEE 220, and ME 230. Students who complete STAT 390 must complete an additional Engineering Fundamentals course from A A 260, IND E 250, IND E 280, M E 123, EE 215, or MSE 170. Students who complete IND E 315 must complete either an additional Engineering Fundamentals course from the above list, or an additional 300-level math course other than statistics.
- b. Civil Engineering Core (40 credits): CEE 307, CEE 317, CEE 327, CEE 337, CEE 347, CEE 357, CEE 367, and CEE 377.
- c. Professional Practice and Capstone Design (7 credits): CEE 440 and one course from CEE 441, CEE 442, CEE 444, or CEE 445. Minimum grade of 2.0 required for both courses in this two-course sequence.
- d. Civil Engineering Technical Electives (15 credits): Minimum 12 credits of CEE 400-level coursework selected from an approved list (see adviser or department Website for list), with at least one core course from four separate areas of concentration within the department, plus any additional CEE 400-level course (~~except CEE 423 and courses~~ not taken to fulfill requirement c or e, above). Minimum grade of 2.0 required for each of the four courses used to fulfill the core courses requirement.
- e. Upper-Division Engineering and Science (12 credits): Choice of additional CEE 400-level courses or courses from an approved list from outside the department.

CEE Junior Year Curriculum Revision: Process and Overview

This document is intended to serve as an overview document outlining the thinking and process that was used to arrive at the revised junior year curriculum. The entire process took over two years, so this is intended to summarize rather than to be exhaustive.

1 Curriculum Review

Starting in 2010 we undertook the task of looking at our overall curriculum (grad and undergrad) in regards to efficiency, sustainability, and scalability. In simple terms, the question was framed in terms of building a system that could fit within a 90-course/year faculty effort budget instead of the existing 120-course/year system. The main ways to try to achieve this included:

- Rearranging material into a smaller number of higher-credit courses
- Identifying opportunities for sharing across areas, levels (e.g. 400/500-level), and/or departments
- Offering smaller numbers of higher-enrollment junior-level courses, coupled with appropriate instructional enhancements

The fee-based program and considerations of future growth added further nuance to this discussion, and there were of course a number of other complicating factors both logistical and philosophical that were identified in the various stages of discussion and planning, including faculty, staff, students, and our external Visiting Committee. These discussions occurred in a number of contexts, both bottom-up and top-down, with the goal of generating a new curriculum plan that we could begin to implement for the 2012-13 year.

The historical rock upon which past efforts to re-engineer our curriculum have foundered is the junior year. This is not surprising given that it represents the core of the department-wide undergraduate curriculum, and with respect to many outcome measures it works fine. However, as it was it demanded a disproportionate share of our instructional bandwidth, and we believed we could maintain excellent outcomes but with a more efficient approach, and the focus of this particular 1503 revision largely centers on the junior year.

2 Curricular Planning

A number of variations on a new junior year were considered, based on a 8-course core model. The following basic parameters/issues were considered in the planning and discussions:

Variables The primary variables considered were the number of cohorts used and the number of quiz sections per class.

Scheduling The new curriculum uses a 3-3-2 set of required courses over three quarters. Compared to our current system (with variations on 4-4-5 courses), the scheduling for the new scheme is intended to be relatively straightforward, with two teaching days for faculty, and with ample time for students outside of class, as well.

Transition Effects Clearly any curriculum change affects a subset of students who for various reasons straddle the boundaries of the old and the new. We therefore have identified the relatively small number of students affected by this particular change, and are arranging accommodation so that their graduation progress is not unreasonably impeded.

Resource Use We looked at a number of resource-use models involving consideration of Faculty Course Quarters (i.e., one faculty member teaching one class for a quarter), and TA Quarter units relative to the previous junior-year TA allocations. Relative to the new curriculum, the previous system was found to be relatively greedy with respect to resource use, without necessarily returning proportionally increased value for faculty or students.

Instructional Quality We have consistently run our CEE 220 sections in a format similar to the proposed new junior year for many years with good outcomes (good student evaluations and good student performance). Our observation has been that well-designed quiz sections can make large (or small) classes work well, and can encourage broader ranges of learning activities for students beyond the simple lecture/assignment/exam model.

Content The net difference in credits between the 8-course model and our current system is five. Combined with the ability to begin taking senior-level courses in the third quarter of the junior year, there need be no overall net drop in content. Nonetheless, considerable attention has been focused on identifying potentially orphaned topics, leveraging opportunities for sharing cross-cutting material, and determining suitable accommodation for providing comparable coverage and exposure with regards to our historical norms. This included hiring a team of TAs to work together during the past summer to develop materials and activities to support the new courses from an integrated, cross-course perspective.

Effect on Overall Curriculum Because the number of required junior-year credits were reduced by five, our overall curriculum has been adjusted to account for the additional credits at the senior level. This was done by adding a credit to our capstone design courses (CEE 44x), and by increasing the number of Upper Division Science and Engineering credits needed for graduation.

3 Outcome

The new set of 300-level core courses that grew out of these discussions have been approved and are being delivered at present. The primary purpose of the current 1503 is to approve the remaining changes necessary to complete the process of adjusting the overall graduation requirements consistent with the new junior year. As in the other steps of the process, all changes have been approved by faculty votes with broad input.



PREREQUISITE & GENERAL EDUCATION COURSES

Mathematics **24 cr**

- ♦ MATH 124 Calc/Analytic Geom I (5)
- ♦ MATH 125 Calc/Analytic Geom II (5)
- ♦ MATH 126 Calc/Analytic Geom III (5)
- MATH 307 Differential Equations (3)
- ♦ MATH 308 or 318 Matrix Algebra (3)
- Statistics: IND E 315* (3) (preferred)*
- or STAT 390 (4) or 300-level or higher math.*

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)

Engineering Fundamentals **20 cr**

- ♦ AMATH 301 Beg Scientific Computing (4) *or*
- CSE 142 Computer Programming I (4)
- ♦ AA 210 Statics (4)
- ♦ CEE 220 Mechanics of Materials (4)
- ♦ ME 230 Kinematics & Dynamics (4)
- One course from: *ME 123, MSE 170, EE 215, IND E 250, AA 260, IND E 280 and IND E 315*.* (Students who take IND E 315 may apply any non-statistics, 300-level MATH course, except MATH 354 and 355, towards the mathematics requirement.)

Written Communication **12 cr**

- ♦ English Composition (5)
- HCDE 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.*

Visual, Literary, & Perf. Arts (VLPA) **10 cr**

VLPA electives selected from University list.

Individuals & Society (I&S) **10 cr**

I&S electives selected from University list.
ECON 200 counts towards above and as I&S.

Additional VLPA or I&S **4 cr**

Can be either VLPA or I&S.

♦ = Upper-division Admission Requirements
 See back (page 2) for additional information.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING UPPER-DIVISION COURSE WORK

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. In the senior year, students engage in a capstone design course in an engineering area of their choice (e.g., Construction/Transportation, etc.).

CEE Junior Year Courses **40 cr**

The following new 300-level courses will be effective Autumn 2012.

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

Take at least one "core" course from four of the six different areas of departmental emphasis. See "Core Courses" list on page 2 (also available on the CEE website). In addition, take any one additional 400-level CEE course, not used elsewhere, for a total of 15 credits.

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

Any 400-level CEE courses (excluding CEE 423) not used elsewhere. Additionally, courses from outside the department may also apply if listed on pre-approved Upper-Division course list (available on CEE website) or by petition.

General Electives

Balance of credits to meet 180 total required for baccalaureate degree.

Note: The BSCE program is accredited by the Engineering Accreditation Commission of ABET (Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Tel: 410-347-7700).

Bachelor of Science in Civil Engineering (BSCE) Program

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
		CEE 100	1		
Total	15	Total	16	Total	15

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
Economics	5	HCDE 231	3	VLPA/IS	4
Total	17	Total	15	Total	15

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

Autumn		Winter		Spring	
Track 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 or grad reqmt, or other elective	5
Total	15	Total	15	Total	15
Track II					
CEE 307	5	CEE 327	5	CEE 337	5
CEE 317	5	CEE 347	5	CEE 367	5
CEE 357	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 Elect	3	UD Elec	3
UD Elect	3	UD Elect	3	Electives	3
Additional credits as desired or needed					

Notes:

- Tech Elec = CEE Technical Electives (required)
- UD Elec = CEE Upper Division Science & Engr 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.
- 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. Please see the CEE Web site for detailed application information and to submit the online form. Under special circumstances, students may apply for conditional admissions pending completion of one or two prerequisite courses.

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

RESOURCES:

UW Admissions

www.admit.washington.edu

UW College of Engineering

www.engr.washington.edu/

UW Course Equivalencies for WA St Comm Colleges

<https://admit.washington.edu/EquivalencyGuide>

UW Course Catalog

www.washington.edu/students/crscat/

UW Time Schedule

www.washington.edu/students/timeschd/

UW Academic Calendar

www.washington.edu/students/reg/calendar.html

TECHNICAL ELECTIVES: CORE COURSES LIST

Construction Core

- CEE 404 Infrastructure Constr (4)
- CEE 421 Pavement Design (3)
- CEE 425 Reinforced Concrete Constr (3)

Transportation Core

- CEE 410 Traffic Engr Fundamentals (3)
- CEE 412 Trans Data Mgmt (3)
- CEE 416 Urb Trans Planning Design (3)

Geotechnical Core

- CEE 436 Foundation Design (3)
- CEE 437 Engineering Geology (3)

Structural core

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

Water Resources/Hydraulics/Fluid Mechanics Core

- CEE 473 Coastal Engineering I (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)

Environmental Core

- CEE 462 Applied Limnology & Pollutant Effects (3)
- CEE 480 Air-Quality Modeling (3)
- CEE 481 Hydraulic Design for Env'l Engr (3)
- CEE 482 Wastewater Treatmt & Reuse (3)
- CEE 483 Drinking Water Treatment (3)
- CEE 490 Air-Pollution Control (4)
- CEE 491 Deterministic Systems (3)



PREREQUISITE & GENERAL EDUCATION COURSES

Mathematics **24 cr**

- ♦ MATH 124 Calc/Analytic Geom I (5)
- ♦ MATH 125 Calc/Analytic Geom II (5)
- ♦ MATH 126 Calc/Analytic Geom III (5)
- MATH 307 Differential Equations (3)
- ♦ MATH 308 or 318 Matrix Algebra (3)
- Statistics: IND E 315* (3) (preferred)
or STAT 390 (4) or 300-level or higher math.
(See note below in Engineering Fundamental)

Physics **15 cr**

- ♦ PHYS 121 Mechanics (5)
- ♦ PHYS 122 Elect-Mag & Osc (5)
- PHYS 123 Waves (5)

Chemistry **10 cr**

- ♦ CHEM 142 General Chemistry (5)
- CHEM 152 General Chemistry (5)

Engineering Fundamentals **19 cr**

- ♦ AMATH 301 Beg Scientific Computing (4) or
CSE 142 Computer Programming I (4)
- ♦ AA 210 Statics (4)
- ♦ CEE 220 Mechanics of Materials (4)
- ♦ ME 230 Kinematics & Dynamics (4)
- One course from: ME 123, MSE 170, EE 215,
IND E 250, AA 260, IND E 280 and IND E
315*. (Students who take IND E 315 may apply any
non-statistics, 300-level MATH course, except
MATH 354 and 355, towards the mathematics
requirement.)

Written Communication **12 cr**

- ♦ English Composition (5)
- HCDE 231 Intro to Technical Writing (3)
- CEE 363 (W) (4) Satisfied by major coursework

Economics *CEE topic requirement*

ECON 200 or 201 (5) or IND E 250 (4)

Individuals & Society (I&S) **10 cr**

I&S electives selected from University list.
ECON 200 counts towards above and as I&S.

Visual, Literary, & Perf. Arts (VLPA) **10 cr**

VLPA electives selected from University list.

Additional VLPA or I&S **4 cr**

- ♦ Indicates prerequisite courses required for admission to the major.

See back (page 2) for additional information.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING COURSES WITHIN THE MAJOR

The CEE program covers six areas of focus: **construction, transportation, geotechnical, structural, water, and environmental** engineering. First-year majors (CEE "juniors") enroll in required 300-level courses as preset, options: Track I or II. (See back for more information.) The CEE "senior" or second year allows students flexibility to complete core technical requirements, explore areas of their own interest, and engage in a capstone design course of their choice.

CEE "Junior" (1st year) Courses* **45 cr**

- CEE 306 Construction Engr I (3)
- CEE 316 Surveying (4)
- CEE 320 Transportation Engr (3)
- CEE 342 Fluid Mechanics (4)
- CEE 345 Hydraulic Engr (4)
- CEE 350 Environmental Engr I (4)
- CEE 360 Sustainability in Engineering (3)
- CEE 363 Construction Materials (4)
- CEE 366 Basic Soil Mechanics (4)
- CEE 379 Elem. Structures I (4)
- CEE 380 Elem Structures II (4)
- CEE 391 Autocad (3)
- CEE 392 MatLab (1) or AMATH 301 (4)

CEE "Senior" (2nd year) Courses:

Professional Practice and Capstone **6 cr**

- CEE 440 Professional Practice (2)
- Capstone Design Course (4)
- Choice of CEE 441, 442, 444 or 445

Technical Electives **15 cr**

Take at least one "core" course from four of the six different areas of departmental emphasis. See "Core Courses" list on page 2 (also available on the CEE website). In addition, take any one additional 400-level CEE course, not used elsewhere, for a total of 15 credits.

Upper-Division Engineering and Science **9 cr**

Any 400-level CEE courses (excluding CEE 423) not used elsewhere. Additionally, courses from outside the department may also apply if listed on pre-approved Upper-Division course list (available on CEE website) or by petition.

General Electives

Note: The BSCE program is accredited by the Engineering Accreditation Commission of ABET (Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Tel: 410-347-7700). The BSCE degree is appropriate for students interested in civil and environmental engineering.

Bachelor of Science in Civil Engineering (BSCE) Program

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
		CEE 100	1		
Total	15	Total	16	Total	15

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
Economics	5	HCDE 231	3	VLPA/IS	4
Total	17	Total	15	Total	15

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

Autumn		Winter		Spring	
Track I					
CEE 306	3	CEE 342	4	CEE 345	4
CEE 316	4	CEE 350	4	CEE 360	3
CEE 320	3	CEE 379	4	CEE 366	4
CEE 363 W	4	CEE 391	3	CEE 380	4
CEE 392	1				
Total	15	Total	15	Total	15
Track II					
CEE 306	3	CEE 345	4	CEE 320	3
CEE 316	4	CEE 350	4	CEE 360	3
CEE 342	4	CEE 366	4	CEE 363W	4
CEE 379	4	CEE 380	4	CEE 391	3
CEE 392	1				
Total	16	Total	16	Total	13

Sample CEE Senior Year

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

Notes:

- For VLPA and I&S, see UW Areas of Knowledge on Web
- IND E 315 may be counted as either a Math class or Engineering Fundamental, but not both.
- AMATH 351 and 352 may be substituted in place of MATH 307 and 308.
- UD Elec = CEE Upper Division Science & Engr Electives
- Tech Elec = CEE Technical Electives

ADMISSIONS:

The CEE program admits students once a year for autumn quarter only. Please see the CEE Web site for detailed application information and to submit the online form. Under special circumstances, students may apply for conditional admissions pending completion of one or two prerequisite courses.

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

RESOURCES:

UW Admissions

www.admit.washington.edu

UW College of Engineering

www.engr.washington.edu/

UW Course Equivalencies for WA St Comm Colleges

www.washington.edu/students/uga/tr/planning/ccequivguide/

UW Course Catalog

www.washington.edu/students/crscat/

UW Time Schedule

www.washington.edu/students/timeschd/

UW Academic Calendar

www.washington.edu/students/reg/calendar.html

TECHNICAL ELECTIVES: CORE COURSES (LIST A)

Construction Core

- CEE 404 Infrastructure Constr (4)
- CEE 421 Pavement Design (3)
- CEE 425 Reinforced Concrete Constr (3)

Transportation Core

- CEE 410 Traffic Engr Fundamentals (3)
- CEE 412 Trans Data Mgmt (3)
- CEE 416 Urb Trans Planning Design (3)

Geotechnical Core

- CEE 436 Foundation Design (3)
- CEE 437 Engineering Geology (3)

Structural core

- CEE 451 Design of Metal Structures (3)
- CEE 452 Design Reinf Concrete Structures (3)
- CEE 453 Prestressed Concrete Design (3)
- CEE 454 Design Timber Structures (3)
- CEE 455 Struc Unit Masonry (3)
- CEE 457 Advanced Struc I (3)

Water Resources/Hydraulics/Fluid Mechanics Core

- CEE 473 Coastal Engineering I (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)

Environmental Core

- CEE 462 Applied Limnology & Pollutant Effects (3)
- CEE 480 Air-Quality Modeling (3)
- CEE 481 Hydraulic Design for Env'l Engr (3)
- CEE 482 Wastewater Treatmt & Reuse (3)
- CEE 483 Drinking Water Treatment (3)
- CEE 490 Air-Pollution Control (4)
- CEE 491 Deterministic Systems (3)