

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

2018–2019 Catalog

First Year: Fall

ENGL 111X–Methods of Communication	3
MATH 251X–Calculus	4
ES 101–Intro to Engineering	3
CHEM 105–General Chemistry	4
Perspectives on Human Condition	3
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Second Year: Fall

MATH 253X–Calculus	4
PHYS 211–General Physics	4
ENGL 211X or 213X	3
ES 209–Statics	3
Perspectives on Human Condition	3
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Third Year: Fall

CE 334–Properties of Materials	3
ES 301–Engineering Analysis	3
ES 331–Mechanics of Materials	3
ES 341–Fluid Mechanics	4
Perspectives on Human Condition	3
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Fourth Year: Fall

CE 344–Water Resources Engr.	3
CE 432–Structural Engineering II	3
CE 470*** or CE 471	1
CE 437 Design of Engr. Systems I	3
Technical Elective*	3
Perspectives on Human Condition	3
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First Year: Spring

COMM 131X or COMM 141X	3
MATH 252X–Calculus	4
CE 112–Elementary Surveying	3
CHEM 106–General Chemistry	4
ES 201–Computer Techniques	3
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Second Year: Spring

MATH 302–Differential Equations	3
PHYS 212–General Physics	4
ES 210–Dynamics	3
GE 261–General Geology for Engineers	3
Perspectives on the Human Condition	3
LS 101X–Library Info and Research	1
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Third Year: Spring

CE 326–Intro. To Geotech. Engineering	4
CE 341–Environmental Engineering	4
CE 331–Structural Engineering I	3
CE 302–Intro Transportation Eng.	3
Technical Elective*	3
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Fourth Year: Spring

ESM 450–Econ. Analysis & Operations	3
CE 438–Design of Engr. Systems II	3
ESM 422–Engineering Decisions	3
Technical Elective*	3
Technical Elective*	3
Perspectives on Human Condition	3
CE 400-EIT Exam	0
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Typical Schedule of Electives

Electives, all 3 credits

CE 434–Timber Design

CE 405–Highways

CE 422–Foundations

CE 442–Environmental Design

CE 451–Construction Cost Estimating

CE 603–Arctic Engineering**

*Complete 12 technical elective credits. Must include 3 credits in the field of environmental engineering, construction, or transportation, 6 credits of CE, ENVE or ESM courses, and 3 credits of either ES 307 or 346. **Up to two graduate-level courses may be used towards graduation. Graduate level courses must be approved by student's semesters of graduation and have at least a 3.0 GPA to take graduate-level courses. *** CE 470 Internship can be taken in summer. Students should consult their advisor.*

NOTE: The ability to utilize computers for normal class work is expected in all engineering classes above the 100 level.

Electives, all 3 credits

CE 406–Traffic Engineering

CE 433–Reinforced Concrete Design

CE 445–Hydrologic Analysis & Design

CE 435–Steel Bridge

CE 424–Introduction to Permafrost

CE 443–Air Pollution Management

2018-2019 CATALOG

CIVIL ENGINEERING

B.S. Degree Requirements
134 Credits

GENERAL REQUIREMENTS

COMMUNICATION: (9)

ENGL 111X (3)____
ENGL 211X or 213X (3)____
COMM 131X or 141X (3)____

PERSPECTIVES ON THE HUMAN CONDITION: (18-22)**

Complete the 6 courses listed **OR** 4 of those listed plus 2 semester length courses in a single AK Native or other non-English language or three semester length courses (9 credits) in American Sign Language.

ANTH 100X/SOC 100X (3)____
ECON/PS 100X (3)____
HIST 100X (3)____
ART/MUS/THR 200X OR HUM 201X
OR ANS 202X (3)____
ENGL/FL 200X (3)____
BA 323 X or COMM 300X or JUST 300x or NRM
303X or PHIL 322X or PS 300X (3)____

Language option as listed above:

_____() _____()
_____() _____()

*MATHEMATICS: (15)

MATH 251X (4)____ MATH 253X (4)____
MATH 252X (4)____ MATH 302 (3)____

*NATURAL SCIENCE: (16)

CHEM 105X (4)____ PHYS 211X (4)____
CHEM 106X (4)____ PHYS 212X (4)____

LIBRARY & INFO SKILLS: (0-1)

LS competency test ____ OR
LS 100X or 101X (1)____

**Designates only grades of "C" or better may be used to fulfill this requirement*

*** Consult catalog for updates in AY 2016-2017*

<http://catalog.uaf.edu/bachelors/general-education-requirements/>

MAJOR REQUIREMENTS

1. *Complete the following: (64)

CE 112 (3)____
CE 302 (3)____
CE 326 (4)____(W)
CE 331 (3)____
CE 334 (3)____
CE 341 (4)____
CE 344 (3)____
CE 432 (3)____

CE 470 or 471 (1)____

CE 400 (0)____(FE EXAM)
CE 437 (3)____

CE 438 (3)____(W/O)

ES 101 (3)____
ES 201 (3)____
ES 209 (3)____
ES 210 (3)____
ES 301 (3)____
ES 331 (3)____
ES 341 (4)____

GE 261 (3)____
ESM 422 (3)____
ESM 450 (3)____(W)

Complete 2 designated (W) courses AND

TOTAL TO DATE: _____

TO BE COMPLETED: _____

2. *Complete 12 credits of technical electives.

ES 307 or 346 (3)____ AND
_____(3)____
_____(3)____
_____(3)____

Must include 3 credits in the field of environmental or transportation engineering, 6 credits of CE, ENVE, ESM courses or approved technical courses, and 3 credits of either ES 307 or ES 346. Up to two graduate-level engineering courses can serve as technical electives if approved by advisor and the student must be within two semesters of graduation and have at least a 3.0 GPA.

Credits for core/general requirements:

58-59

Credits for major:

76

Total credits required for degree

134-135