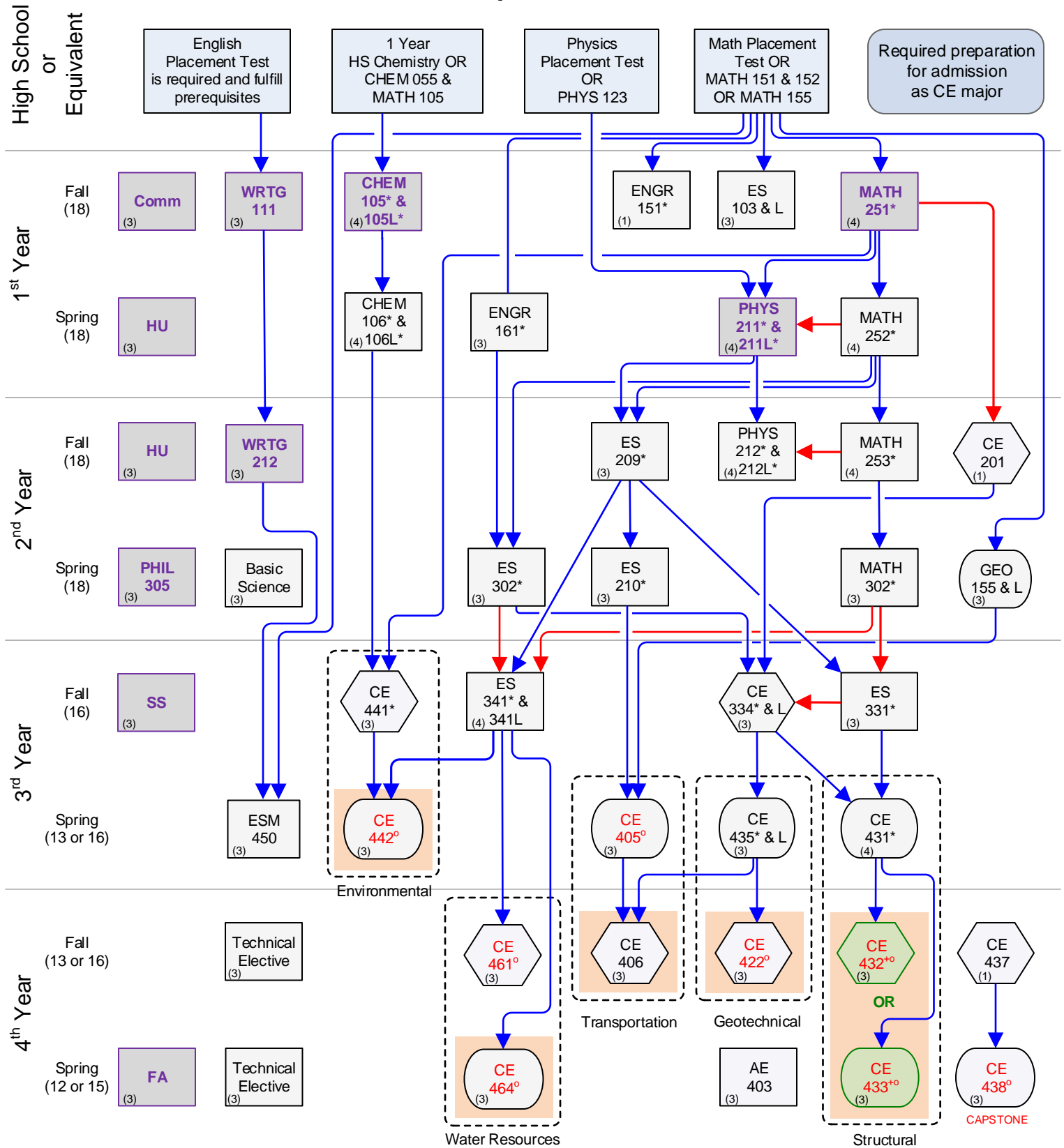


UAA Civil Engineering Program Outline & Recommended Course Sequence

Catalog Year: 2017/2018



Course Offerings:



Prerequisite



Prerequisite or Concurrent



Course that fulfill GER Requirements:
Comm – Communications
HU – Humanities
FA - Fine Arts
SS - Social Science

(x) indicates number of credits per course / semester

* must be completed with a grade of C or better

Find more information on the web at <https://www.uaa.alaska.edu/civilengineering>

°At least 1 design course must be taken prior to CAPSTONE

*Either CE432 or CE433 is Required, the other may be used as Tech Elective

Select 4 courses, one each in four of the five disciplines

Bachelor of Science in Civil Engineering Recommended Course Sequence

Required Courses

CE A201*	Intro to Civil Engineering	1
CE A334*	Properties of Materials	3
CE A334L*	Properties of Materials lab	0
CE A403	Arctic Engineering	3
CE A405	Transportation Engineering I	3
CE A406 ³	Transportation Engineering II	3
CE A422 ³	Foundation Engineering	3
CE A431*	Structural Analysis	4
CE A432 ³	Steel Design ³	3
CE A433 ³	Reinforced Concrete Design ³	3
CE A435/L*	Soil Mechanics w/lab	3
CE A437	Project Planning	1
CE A438	Design of Engr. Systems	3
CE A441*	Intro Environmental Engr.	3
CE A442 ³	Environmental Systems Design	3
CE A461	Hydrology Engineering	3
CE A464 ³	Hydraulics Engineering	3
CHEM A105*	General Chemistry I	3
CHEM A105L*	General Chemistry I Lab	1
CHEM A106*	General Chemistry II	3
CHEM A106L*	General Chemistry II Lab	1
ENGR A151*	Engr. Practices I	1
ENGR A161*	Engr. Practices II	3
ES A103	Engr. Graphics	3
ES A103L	Engr. Graphics Lab	0
ES A209*	Engineering Statics	3
ES A210*	Engineering Dynamics	3
ES A302*	Engr. Data Analysis	3
ES A331*	Mechanics of Materials	3
ES A341*	Fluid Mechanics	3
ES A341L*	Fluid Mechanics Lab	0
ESM A450	Econ. Analysis & Operation	3
GEO A155*	Fundamentals of Surveying	3
GEO A155L*	Fundamentals of Surveying Lab	0
MATH A251*	Calculus I	4
MATH A252*	Calculus III	4
MATH A253*	Calculus II	4
MATH A302*	Differential Equations	3
PHIL A305	Professional Ethics	3
PHYS A211*	General Physics I	3
PHYS A211L*	General Physics I Lab	1
PHYS A212*	General Physics II	3
PHYS A212L*	General Physics II Lab	1
WRTHG A212	Writing & the Professions	3
<u>Other Requirements</u>		
	CE Technical Elective ⁴	6
	Basic Science Elective ²	3
	Fine Arts	3
	Humanities	6
	Oral Communication	3
	Social Science	3
	Written Communication ¹	3

All courses with an asterisk (*) must be completed with a grade of “C” or better.

¹Students who do not meet the prerequisite requirements for WRTG A212 must take WRTG A111

²The Civil Engineering Program requires a Basic Science Elective (min. 3 credits) is taken from the following list: BIOL A115/L Fundamentals of Biology I with Lab (4), BIOL/GEOL A178 Fundamentals of Oceanography (3), BIOL A271/L Principles of Ecology with Lab (4), GEOL A111 Physical Geology (4), GEOL A115 Environmental Geology (3).

3 A 2nd course is required in four of the five disciplines. If all five are taken, one will count as a technical elective. If the structural discipline is chosen as one of the four, the 2nd course may be fulfilled by taking either CE A432 Steel Design or CE A433 Reinforced Concrete Design. If both courses are taken, the second course will count as a technical elective.

⁴Graduate level courses (600 or above) that may be used as technical electives are listed in the Civil Engineering section of the catalog. A petition must be filed with the department to apply these courses as undergraduate credit.