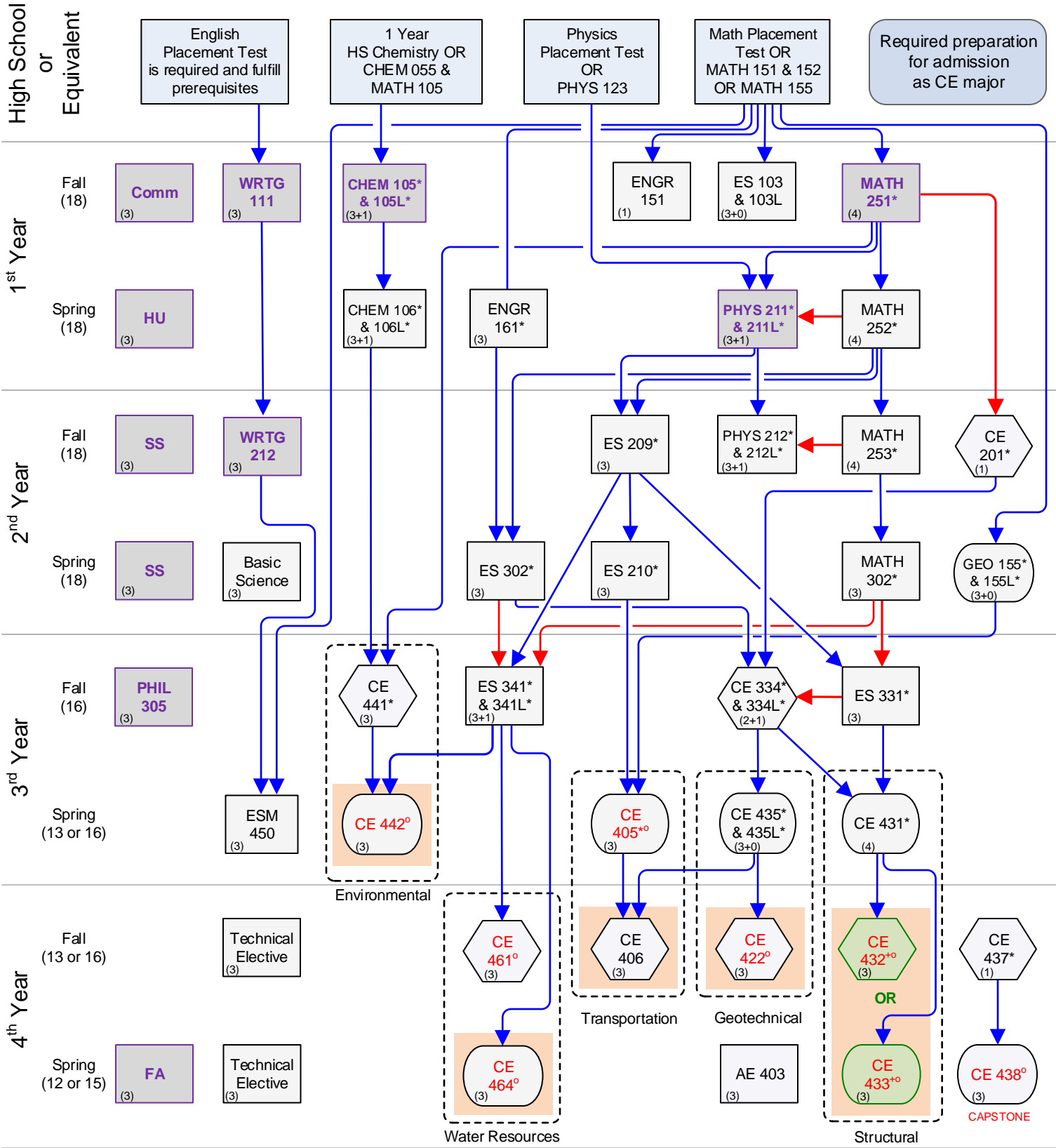


UAA Civil Engineering Program Outline & Recommended Course Sequence

Catalog Year: 2017/2018



Course Offerings:



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

Prerequisite

Prerequisite or Concurrent

(x) indicates number of credits per course / semester

* must be completed with a grade of C or better

^oAt 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

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

09/2017 - Hamel

Bachelor of Science in Civil Engineering Recommended Course Sequence

Required Courses

CE A201*	Intro to Civil Engineering	1	ES A331*	Mechanics of Materials	3
CE A334*	Properties of Materials	3	ES A341*	Fluid Mechanics	3
CE A334L*	Properties of Materials lab	0	ES A341L*	Fluid Mechanics Lab	0
CE A403	Arctic Engineering	3	ESM A450	Econ. Analysis & Operation	3
CE A405*	Transportation Engineering I	3	GEO A155*	Fundamentals of Surveying	3
CE A406 ³	Transportation Engineering II	3	GEO A155L*	Fundamentals of Surveying Lab	0
CE A422 ³	Foundation Engineering	3	MATH A251*	Calculus I	4
CE A431*	Structural Analysis	4	MATH A252*	Calculus III	4
CE A432 ³	Steel Design ³	3	MATH A253*	Calculus II	4
CE A433 ³	Reinforced Concrete Design ³	3	MATH A302*	Differential Equations	3
CE A435/L*	Soil Mechanics w/lab	3	PHIL A305	Professional Ethics	3
CE A437*	Project Planning	1	PHYS A211*	General Physics I	3
CE A438	Design of Engr. Systems	3	PHYS A211L*	General Physics I Lab	1
CE A441*	Intro Environmental Engr.	3	PHYS A212*	General Physics II	3
CE A442 ³	Environmental Systems Design	3	PHYS A212L*	General Physics II Lab	1
CE A461	Hydrology Engineering	3	WRTG A212	Writing & the Professions	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			

Other Requirements

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).

³A 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.