

Cleveland State University
Washkewicz College of Engineering
Bachelor of Civil Engineering (CVE)
Fall 2022

CVE Degree Map for students immediately eligible for College Writing I, General Chemistry I, and Calculus I

First Year													
Fall Semester				Credits	Major	Gen. Ed.	Spring Semester				Credits	Major	Gen. Ed.
ENG 100/101 Intensive Writing OR College Writing I				3		W/C	ESC 102/ENG 102 Tech. Writing/College Writing II				3		W/C
MTH 181 Calculus I				4	X	M	MTH 182 Calculus II				4	X	M
CHM 261 General Chemistry I				3	X	NS	PHY 241 University Physics I				5	X	NS
CHM 266 General Chemistry Lab I				1	X	NS&LAB	ESC 151 C Programming				3	X	
ESC 120 Introduction to Engineering Design				2	X	Intro	OR ESC 152 Programming with MATLAB						
ESC 100 New Student Orientation				1	X								
Semester Total				14			Semester Total				15		

Second Year													
Fall Semester				Credits	Major	Gen. Ed.	Spring Semester				Credits	Major	Gen. Ed.
ESC 201 Statics				3	X		ESC 211 Strength of Materials				3	X	
CVE 211 Surveying				3	X		CVE 310 Strength of Material Lab				2	X	
CVE 212 Surveying lab				2	X		CVE 360 Mechanics of Fluids				4	X	
PHY 242 University Physics II				5	X	NS	GEO 100 Introduction to Geology				3	X	
ESC 250 Differential Equations for Engineers				3	X		GEO 101 Introduction Geology Lab				1	X	
MTH 283 Multivariable Calculus for Engineers				2	X		ESC 310 Engineering Statistics & Probability				3	X	
							ESC 130 Introduction to Co-op Orientation*				1		
Semester Total				18			Semester Total				17		

Third Year													
Fall Semester				Credits	Major	Gen. Ed.	Spring Semester				Credits	Major	Gen. Ed.
ESC 202 Dynamics				3	X		CVE 322 Structural Steel Design				3	X	
CVE 312 Structural Analysis I				3	X		CVE 331 Intro to Geotechnical Engineering				3	X	
CVE 361 Hydraulic Engineering				3	X		CVE 332 Geotechnical Engineering Lab				2	X	
CVE 362 Hydraulics Lab				2	X		CVE 422 Reinforced Concrete Design				3	X	
CVE 371 Environmental Engineering I				3	X		CVE 461 Hydrologic Analysis				3	X	
CVE 374 Environmental Engineering Lab				2	X		ESC 282 Engineering Economy				3	X	SS
Semester Total				16			Semester Total				17		

Fourth Year													
Fall Semester				Credits	Major	Gen. Ed.	Spring Semester				Credits	Major	Gen. Ed.
CVE 426 Technical Project Management				2	X	CAP&SPAC	CVE 427 Capstone Design				2	X	WAC
CVE 429 Foundation Engineering				3	X		CVE 403 Construction Planning				3	X	
CVE 446 Transportation Engineering				3	X		CVE Technical Elective				3	X	
CVE Technical Elective				3	X		General Education Elective**				3		A&H
PHL 215 Engineering Ethics				3	X	A&H+WAC	General Education Elective**				3		SS
General Education Elective				3		AA DIV	General Education Elective				3		US DIV
Semester Total				17			Semester Total				17		

Degree Total Hours: 130 or 131 with ESC 130*

Assumption: University Requirement of Foreign Language has been met by either successfully completing two (2) years of the same language in high school; or two (2) semesters of the same language in college; or passing CSU's language placement test in reading, writing, and speaking of a second language other than English.

College/Program Notes:

The plan above is a suggested guide to ensure that all General Education, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of General Education courses, although the M and W/C requirements should be completed during the first year of study. General Electives ensure that a student accumulates the minimum credit hour totals needed for graduation. Students must have a **minimum of 130 total credit hours**, of which a **minimum of 42 credit hours** must be upper division (300 or 400-level courses). Depending upon other elective choices made, students may not need as many general electives as indicated above or may need additional electives. For information about acquiring a Math Minor by substituting one (1) ESC Math course and adding MTH 284, a 2-credit, 7-week math course, visit [CVE Math Minor](#) or email: impt.engr.info@csuohio.edu to request more guidance.

University Notes:

General Education Key + Notes	
General Ed. courses can be taken in any order except ESC 282 (Engineering Economy) after MTH 182 (Calculus II) as well as PHL 215 (Engineering Ethics after ESC 102 /ENG 102 (Tech. Writing/College Writing II.)	
Intro = Introduction to University Life Requirement (one course required)	SS = Social Sciences Requirement (2 courses required, one of which must be focused outside the US)
W/C = Writing/Composition Requirement (two courses, each C or better required)	A&H = Arts & Humanities Requirement (2 courses required, one of which must be focused outside the US)
M = Mathematics (two courses required, each C or better)	DIV = Social Diversity Requirement (2 courses required, one US Diversity and one African American Experience)
NS = Natural Sciences (two courses required, one of which must have a lab – NS&LAB)	WAC/SPAC = Writing/Speaking Across the Curriculum Requirement (3 courses required, one in the major)
ESC 100 = waived for transfer students with 60 credits or more	CAP = Capstone Requirement
* Introduction to Co-op Orientation is highly recommended, yet not required.	**of the SS and A&H courses, at least one must be focused on Africa, Latin America, Asia or the Middle East (ALAAME)

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