Cleveland State University
Washkewicz College of Engineering

Bachelor of Civil Engineering

Effective FALL 2025

First Year

Fall Semester	Credits	Major	CC	Spring Semester	Credits	Major	CC
ENG 100 or ENG 101 College Writing I (Finding Your Voice)	3		X	ESC 102 Technical Writing or ENG 201 (Research and Professional Writing)	3		X
MTH 181 Calculus I (Quantitative and Formal Reasoning)	4	X	X	MTH 182 Calculus II (Data & Digital Literacy/Quantitative and Formal Reasoning)	4	X	X
CHM 261 General Chemistry I	3	X		PHY 241 University Physics I (Scientific Inquiry + Scientific Investigation)	5	X	X
CHM 266 General Chemistry Lab I	1	X		ESC 151 C Programming OR ESC 152 Programming w/MATLAB	3	X	
INQ 170 Engineering Launch (Inquiry Launch)*	3	X	X	CVE 170 Civil Engineering Graphics Lab	2	X	
Semester Total	*14*			*Semester Total*	*17*		

Second Year

Fall Semester	Credits	Major	CC	Spring Semester	Credits	Major	CC
ESC 201 Statics	3	X		ESC 211 Strength of Materials	3	X	
ESC 250 Differential Equations for Engrs.	3	X		CVE 310 Strength of Material Lab	2	X	
MTH 283 Multivariable Calculus for Engrs.	2	X		CVE 360 Mechanics of Fluids and Basic Thermal Systems for Civil Engineers	4	X	
PHY 242 Univ. Physics II (Scientific Inquiry)	5	X	X	GEO 100 Introduction to Geology	3	X	
CVE 211 Surveying	2	X		GEO 101 Geology Lab	1	X	
CVE 212 Surveying lab	1	X		ESC 310 Engineering Stats/ Probability	3	X	
Semester Total	*16*			*Semester Total*	*16*		

Third Year

Fall Semester	Credits	Major	CC	Spring Semester	Credits	Major	CC
ESC 202 Dynamics	3	X		ESC 282 Engineering Economy	3	X	
CVE 312 Structural Analysis I	3	X		CVE 322 Structural Steel Design	3	X	
CVE 361 Hydraulic Engineering	3	X		CVE 331 Intro. To Geotechnical Engineering	3	X	
CVE 362 Hydraulics Lab OR CVE 363 Hydraulics Lab (Writing) (WAC)	2	X		CVE 332 Geotechnical Engineering Lab OR CVE 333 Geotechnical Engineering Lab (Writing) (WAC)	2	X	
CVE 371 Environmental Engineering I	3	X		CVE 461 Hydrologic Analysis	3	X	
CVE 374 Environmental Engineering Lab	2	X		CVE 422 Reinforced Concrete Design	3	X	
Semester Total	*16*			*Semester Total*	*17*		

Fourth Year

Fall Semester	Credits	Major	CC	Spring Semester	Credits	Major	CC
CVE 426 Preliminary Design (WAC)	2	X		CVE 403 Construction Planning and Estm	3	X	
PHL 215 Engineering Ethics (Human Culture & Creativity)	3	X	X	CVE 427 Capstone Design (SPAC)	2	X	
CVE 446 Transportation Engineering	3	X		CVE Tech Elective	3	X	
CVE 429 Foundation Engineering	3	X		Core (African American History & Culture)	3		X
CVE Tech Elective	3	X		Core (Diversity in Society)	3		X
Core (Global Human Perspectives)	3		X	Core (Society & Human Behavior)	3		X
Semester Total	*17*			*Semester Total*	*17*		
Degree Total: 130 hours							

The plan above is a suggested guide to ensure that all Core Curriculum, College, University, and Major requirements are met within 4 years of study. 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). This information is provided solely for the convenience of the reader, and the University expressly disclaims any liability which may otherwise be incurred. This publication is neither a contract nor an offer to make a contract. While every effort has been made to ensure the accuracy of the information, the University reserves the right to make changes at any time with respect to course offerings, degree requirements, services provided, or any other subject addressed herein.

* INQ 170 is required for all engineering, technology, and computer science majors, and meets the Core Curriculum requirement for Inquiry Launch. ESC 120 is required in place of INQ 170 in the following cases: (a) transfer students; however, those who have had co-op experience in engineering/computer science and/or have transferred 12 credits of engineering/computer science courses can petition to waive ESC 120; (b) students who, as freshmen at CSU, started in another major and completed an Inquiry Launch course different from INQ 170; (c) Honors students who take the Honors Inquiry Launch course. Neither INQ 170 nor ESC 120 is required for transfer students with an Associates of Applied Science degree.

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First Year

Fall Semester	Credit	CC	Spring Semester	Credits	CC	Summer Semester	Credits	CC
CHM 261 General Chemistry I	3		CVE 170 Civil Engineering Graphics Lab	2		Work or school		
CHM 266 General Chemistry Lab I	1		ESC 102 Technical Writing or ENG 201 (Research and Professional Writing)	3	X			
ENG 100 or ENG 101 College Writing I (Finding Your Voice)	3	X	ESC 151 C Programming OR ESC 152 Programming w/MATLAB	3				
MTH 181 Calculus I (Quantitative and Formal Reasoning)	4	X	MTH 182 Calculus II (Data & Digital Literacy/Quantitative and Formal	4	X			
INQ 170 Engineering Launch (Inquiry Launch)*	3	X	PHY 241 University Physics I (Scientific Inquiry + Scientific Investigation)	5	X			
ESC 130 Engineering Co-op Orientation	1							
Semester Total	*15*		*Semester Total*	*17*		*Semester Total*		

Second Year

Fall Semester	Credit	CC	Spring Semester	Credits	CC	Summer Semester	Credits	CC
ESC 201 Statics	3		ESC 211 Strength of Materials	3		ESC 400 Co-op	1	
ESC 250 Differential Equations for Engrs.	3		CVE 310 Strength of Material Lab	2				
MTH 283 Multivariable Calculus for Engrs.	2		CVE 360 Mechanics of Fluids and Basic Thermal Systems for Civil Engineers	4				
PHY 242 Univ. Physics II (Scientific Inquiry)	5	X	GEO 100 Introduction to Geology	3				
CVE 211 Surveying	2		GEO 101 Geology Lab	1				
CVE 212 Surveying lab	1		ESC 310 Engineering Stats/ Probability	3				
Semester Total	*16*		*Semester Total*	*16*		*Semester Total*	*1*	

Third Year

Fall Semester	Credit	CC	Spring Semester	Credits	CC	Summer Semester	Credits	CC
CVE 361 Hydraulic Engineering	3		ESC 400 Co-op	1		ESC 202 Dynamics	3	
CVE 362 Hydraulics Lab OR CVE 363 Hydraulics Lab (Writing) (WAC)	2					Core (African American History & Culture)	3	X
CVE 312 Structural Analysis I	3							
CVE 371 Environmental Engineering I	3							
CVE 374 Environmental Engineering Lab	2							
ESC 282 Engineering Economy	3							
Semester Total	*16*		*Semester Total*	*1*		*Semester Total*	*6*	

Fourth Year

Fall Semester	Credit	CC	Spring Semester	Credits	CC	Summer Semester	Credits	CC
ESC 400 Co-op	1		CVE 322 Structural Steel Design	3		Core (Society & Human Behavior)	3	X
			CVE 331 Intro. To Geotechnical Engring	3				
			CVE 332 Geotechnical Engineering Lab OR CVE 333 Geotechnical Engineering Lab	2				
			CVE 461 Hydrologic Analysis	3				
			CVE 422 Reinforced Concrete Design	3				
Semester Total	*1*		*Semester Total*	*14*		*Semester Total*	*3*	

Fifth Year

Fall Semester	Credit	CC	Spring Semester	Credits	CC	Summer Semester	Credits	CC
CVE 429 Foundation Engineering	3		CVE 403 Construction Planning and Estm	3				
CVE 446 Transportation Engineering	3		CVE 427 Capstone Design (SPAC)	2				
CVE 426 Preliminary Design (WAC)	2		CVE Tech Elective	3				
CVE Tech Elective	3		Core (Global Human Perspectives)	3	X			
PHL 215 Engineering Ethics (Human Culture & Creativity)	3	X	Core (Diversity in Society)	3	X			
Semester Total	*14*		*Semester Total*	*14*		*Semester Total*		

Degree Total: 134 hours

The plan above is a suggested guide to ensure that all Core Curriculum, College, University, and Major requirements are met within 5 years of study. 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). This information is provided solely for the convenience of the reader, and the University expressly disclaims any liability which may otherwise be incurred. This publication is neither a contract nor an offer to make a contract. While every effort has been made to ensure the accuracy of the information, the University reserves the right to make changes at any time with respect to course offerings, degree requirements, services provided, or any other subject addressed herein.

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