

Cleveland State University
Washkewicz College of Engineering
Bachelor of Science in Computer Science and Electrical Engineering
Computer Science + Electrical Engineering Degree Map (New Core Curriculum - Effective Fall 2025)

First Year								
Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed	
ENG 100 Intensive College Writing ENG 101 College Writing I	3		FYV	ESC 102 Technical Writing or ENG 102 College Writing II	3		RPW	
MTH 181 Calculus I	4		FQR	MTH 182 Calculus II	4		DDL/FQR	
CIS 151 Invitation to Computing or ESC 151 C Programming	3	X		PHY 241 University Physics I	5		SI/SIL	
INQ 170 Inquiry Launch to Engineering Society and Human Behavior (A&H)	3	X	IL	CIS 260 Introduction to Programming	4	X		
	3		SHB					
Semester Total	16			Semester Total	16			

Second Year								
Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed	
PHY 242 University Physics II	5		SI/SIL	ESC 310 Engineering Stats/Probability	3	X		
EEC 310 Electric Circuits I	4	X		EEC 311 Electric Circuits II	4	X		
Diversity in Society	3		DS	EEC 313 Electronics I	3	X		
MTH 288 Linear Algebra	3	X		CIS 265 Data Structure and Algorithm	4	X		
ESC 250 Differential Equations	3	X		ESC 130 Career Prep Course* (Optional)	1			
Semester Total	18			Semester Total	14 or 15			

Third Year								
Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed	
CIS 340 Systems to Programming	3	X		CIS 345 Operating Systems	3	X		
MTH 220 Discrete Mathematics	3	X		CIS 390 Introduction to Algorithms	3	X		
EEC 383 Digital Systems	3	X		CIS 480 Computer Architecture	3	X		
PHL 215 Technology Ethics	3	X	HCC	EEC 318 Analysis, Des. & Sim. of Dyn. Systems	3	X		
CIS 335 Language Processor	3	X		EEC 384 Digital Systems Lab	2	X		
EEC 316 Electronics Devices Lab	1	X						
Semester Total	16			Semester Total	14			

Fourth Year								
Fall Semester	Credits	Major	Gen Ed	Spring Semester	Credits	Major	Gen Ed	
CIS/EEC 493 Design Project I	2	X	WAC	CIS/EEC 494 Design Project II	3	X	CAP	
ESC 282 Engineering Economy	3	X		EEC 417 Embedded Systems	3	X		
African American History and Culture	3		AAHC	EEC 440 Control Systems	3	X		
Global Human Perspectives (A&H)	3		GHB	CIS 402/EEC 414 Technical Communication	2	X	WAC	
General Elective	3	X		General Elective	1	X		
Semester Total	14			Semester Total	12			
Total Degree Hours: 120 (*121 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 Core Curriculum, College, University, and Major requirements are met within 4 years of study. Students may deviate from the suggested placement of Core Curriculum courses, although the FYP, RPW, FQR and DDL 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 120 total credit hours. Depending upon elective choices made, students may not need as many electives as indicated above or may need additional electives.

* ESC 130 is highly recommended but not required.

Core Curriculum Key + Notes		
AAHC = African-American History and Culture	CAP = Capstone Requirement	DDL = Data & Digital Literacy
DS = Diverse Society	FQR = Formal & Quantitative Literacy	FYV = Finding Your Voice
GHP = Global Human Perspectives	HCC = Human Culture and Creativity	IL = Inquiry Launch
RPW = Research & Professional Writing	SHB = Society & Human Behavior	SI = Scientific Inquiry
SIL = Scientific Investigations Lab	WAC = Writing Across the Curriculum Req	

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