

Cleveland State University  
Washkewicz College of Engineering  
Bachelor of Science in Computer Science (CS)

Fall 2022

CS Degree Map for students immediately eligible for College Writing I and Calculus I

<b>First Year</b>								
Fall Semester	Credits	Major	Gen. Ed.	Spring Semester	Credits	Major	Gen. Ed.	
ENG 100 Intensive Writing or ENG 100 Writing I	3		W/C	ESC 102 Tech. Writing or ENG 102 College Writing II	3		W/C	
MTH 181 Calculus I	4	X	M	MTH 182 Calculus II	4	X	M	
CIS 151 Invitation to Computing	3	X		PHY 243 University Physics I (Writing)	5	X	NS&WAC	
ESC 120 Introduction to Engineering Design	2	X		CIS 260 Introduction to Programming	4	X		
ESC 100 New Student Orientation	1		INTRO					
<b>Semester Total</b>	<b>13</b>			<b>Semester Total</b>	<b>16</b>			

<b>Second Year</b>								
Fall Semester	Credits	Major	Gen. Ed.	Spring Semester	Credits	Major	Gen. Ed.	
CIS 265 Data Structures & Algorithms	4	X		CIS 335 Language Processors	3	X		
PHY 244 University Physics II (Writing)	5	X	NS&WAC	MTH 288 Linear Algebra	3	X		
ESC 310 Engineering Statistics & Probability	3	X		PHL 215 Eng. Ethics or PHL 216 Data Ethics	3	X	A&H+WAC	
MTH 220 Introduction to Discrete Mathematics	3	X		General Education Elective	3	X	AA DIV	
ESC 130 Engineering Co-op Orientation*	1			ESC 282 Engineering Economy	3	X	SS	
<b>Semester Total</b>	<b>16</b>			<b>Semester Total</b>	<b>15</b>			

<b>Third Year</b>								
Fall Semester	Credits	Major	Gen. Ed.	Spring Semester	Credits	Major	Gen. Ed.	
CIS 340 Systems Programming	3	X		CIS 345 Operating Systems	3	X		
CIS 390 Introduction to Algorithms	3	x		CIS 430 Database Concepts	3	X		
CIS 424 Comparative Programming Languages	3	X		CIS 434 Software Engineering	3	X		
ESC 414 Technical Communication	2	X	WAC	CIS 454 Computer Networks	3	X		
CIS 480 Introduction to Computer Architecture	3	X		General Education Elective**	3		A&H	
General Education Elective**	3		SS					
<b>Semester Total</b>	<b>17</b>			<b>Semester Total</b>	<b>15</b>			

<b>Fourth Year</b>								
Fall Semester	Credits	Major	Gen. Ed.	Spring Semester	Credits	Major	Gen. Ed.	
EEC 493 Senior Design I	2	X		EEC 494 Senior Design II	3	X	CAP	
CIS 475 Computer Security	3	X		Computer Science Major Elective	3	X		
Computer Science Major Elective	3	X		Computer Science Major Elective	3	X		
Computer Science Major Elective	3	X		Computer Science Major Elective	3	X		
Computer Science Major Elective	3	X		General Education Elective	3		US DIV	
<b>Semester Total</b>	<b>14</b>			<b>Semester Total</b>	<b>15</b>			

**Degree Total Hours: 120 or 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 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/QL 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 120 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 adding MTH 284, Multivariable Calculus for Engineers, a 2-credit, 7-week math course, visit [CS Math Minor](#) or email: [impt.engr.info@csuohio.edu](mailto:impt.engr.info@csuohio.edu) to request more guidance.

**University Notes:**

General Education Key + Notes	
General Ed. Electives 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 is 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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