

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, General Chemistry I, and Calculus I

| First Year | | | | | | | | |
|--|-----------|-------|----------|---|-----------|-------|----------|--|
| 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 | | | | | |
| Semester Total | 13 | | | Semester Total | 16 | | | |

| Second Year | | | | | | | | |
|--|-----------|-------|----------|-----------------------------|-----------|-------|----------|--|
| 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 Engineering 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 | |
| Semester Total | 16 | | | Semester Total | 15 | | | |

| Third Year | | | | | | | | |
|---|-----------|-------|----------|------------------------------|-----------|-------|----------|--|
| 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 | | | | | |
| Semester Total | 17 | | | Semester Total | 15 | | | |

| Fourth Year | | | | | | | | |
|--|-----------|-------|----------|---------------------------------|-----------|-------|----------|--|
| 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 | |
| Semester Total | 14 | | | Semester Total | 15 | | | |
| 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 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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