# Cleveland State University Washkewicz College of Engineering

Associate of Science to Bachelor of Science in Computer Science Pathway

#### **SUGGESTED SEQUENCE AT TRI-C** First Year **Spring Semester Fall Semester** Credits Credits ENG 1010/101H College Composition I ENG 1020/102H College Composition II 3 3 5 MATH 1620 Calculus II 5 MATH 1610 Calculus I 3 PHYS 2310 General Physics I 5 OT36 Social & Behavioral Science Elective\* 5 IT 1050 Programming Logic<sup>^</sup> 3 **OT36 Natural Science Elective** MET 1100 Technology Orientation 2 18 16 **Semester Total Semester Total** Second Year **Fall Semester Spring Semester** Credits **Credits** IT 2650 Java Programming IT 2660 Data Structures & Algorithm 4 4 PHYS 2320 General Physics II 5 IT 2351 Enterprise Database 3 MATH 2410 Linear Algebra MET 2422 Fundamentals of Engineering Economics 3 3 OT36 Arts & Humanities\*\* OT36 Arts & Humanities\*\* 3 3

# **SUGGESTED SEQUENCE AT CSU**

15

OT36 Social & Behavioral Science Elective\*

Total minimum credits earned at Tri-C

**Associate of Science Degree Awarded** 

3

16

65

**Semester Total** 

### Third Year

Fall Semester	Credits	Spring Semester	Credits
CIS 335 Language Processors	3	ESC 310 Engineering Stats	3
CIS 340 Systems Programming	3	CIS 345 Operating Systems	3
CIS 434 Software Engineering	3	CIS 480 Intro to Computer Architecture	3
CIS 424 Comparative Program Lang	3	CIS 390 Intro to Algorighms	3
MTH 220 Intr. To Discrete Math	3	CIS 430 Database Concepts	3
		Semester Total	15
Semester Total	15		

## Fourth Year

Fall Semester	Credits	Spring Semester	Credits
EEC 493 Senior Design I	2	EEC 494 Senior Design II	3
PHL 215 Engineering Ethics	3	EEC 414 Technical Communication	2
CIS 454 Computer Networks	3	CS Major Elective	3
CIS 475 Computer Security	3	CS Major Elective	3
CS Major Elective	3	CS Major Elective	3
CS Major Elective	3	CS Major Elective	3
Semester Total	17	Semester Total	17
		Bachelor of Arts Awarded	129

<sup>\*</sup> Social and Behavioral Science Elective course suggestions: SOC 2310, 2550

This Transfer Pathway completes the Associate of Arts degree, which must total at least 60 semester credits and includes 36-40 credits of the Ohio Transfer 36 (OT36), which are approved Tri-C general education requirements. OT36 details can be found at https://www.ohiohighered.org/Ohio-Transfer-36.

### **Additional Information:**

Assumptions: college-level readiness in MATH (eligible to register for Calculus I) and ENG; no Foreign Language Deficiency (FLD).

**Semester Total** 

Grade restriction: Computer Science students are limited to two grades of "D" in CIS courses.

CSU requires a minimum of 120 total credit hours for graduation. At least 30 credits must be completed in-residence at CSU. At least 24 of the in-residence credits must be completed at the upper division (300/400) level. An overall total of 42 upper division (300/400) level credits are required. Students deficient in total credits or in-residence credits must take additional elective credits to meet the minimum requirements. Depending upon other elective choices made, students may not need as many general electives as indicated above, or may need additional electives.

<sup>^</sup> MET 1100 can be substituted for the prerequisite course (IT 1025)

<sup>\*\*</sup> Non-US courses preferred

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For students who have earned an Associate of Arts degree from Cuyahoga Community College, the following general education categories will be considered met: English Composition, Mathematics/Quantitative Literacy, Arts & Humanities (including the non-US/ALAAME requirement), Social Sciences (including the non-US/ALAAME requirement), Natural Science (including the lab requirement) and Social Diversity. Students would still be required to take at least two Writing Across the Curriculum (WAC) courses (including one in the major) and complete a Capstone Experience in the major. The WAC and Capstone Experience requirements are typically met with upper-division courses. Students who do not complete the Associate of Arts degree are responsible for the completion of the entire General Education Requirements at Cleveland State University.

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This map represents one example of how to complete the AS and BS degrees. Students should work closely with counselors/advisors at both institutions to discuss options.

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