COLLEGE OF ENGINEERING & COMPUTER SCIENCE
DEARBORN | UNIVERSITY OF MICHIGAN-DEARBORN

Sample Pathway to Bachelor of Science in *Computer & Information Science*, concentration in Artificial Intelligence (120 credits) **Fall 2026**

SEMESTER 1	SEMESTER 2	Notes
☐ **CIS 150+ CIS 150L** (4) *Computer Science I* (MATH 115*) ☐ **COMP 105** (3) *Writing & Rhetoric I* DDC GEWO ☐ **MATH 115** (4) *Calculus I* (MATH 105 'C-' or placement); DDC GEQT ☐ **DDC course** (3) GEHA See DDC master list for options	☐ **CIS 200** + **CIS 200L** (4) *Computer Science II* (CIS 150 'C-', MATH 115) ☐ **CIS 275** (4) *Discrete Structures I* (CIS 200*****, MATH 115) ☐ **MATH 116** (4) *Calculus II* (MATH 115 'C-') ☐ **DDC course** (3) GEHA See DDC master list for options	• The sample pathways were created with Fall and Winter semester enrollment in mind. Summer semesters can be used to lessen the workload, and/or participate in co-op or research. • For DDC requirements, please see the University's guidelines
SEMESTER 3	**SEMESTER 4**	**Notes**
☐ **Lab Science Sequence I** (4) *Choose from: BIOL 130, GEOL 118* (Fall only), *CHEM 134, PHYS 125, PHYS 150;* DDC GENS ☐ **CIS 350** (4) *Data Structures* (MATH 115, CIS 200 'C-', CIS 275) ☐ **CIS 306** (4) *Discrete Structures II* (CIS 275); DDC GEIN ☐ **MATH 227** (3) *Intro to Linear Algebra* (MATH 116 'C-') ☐ **DDC course** (3) GESB See DDC master list for options	☐ **Lab Science Sequence II** (4) Same subject from Sequence I: *BIOL 320* (Summer only), *GEOL 218 (Winter only), CHEM 136, PHYS 126, PHYS 151;* DDC GENS ☐ **CIS 310** (4) *Assembly Language* (MATH 115, CIS 200, CIS 275) ☐ **IMSE 317** (3) *Eng probability and Stats* (MATH 116) ☐ **COMP 270** (3) *Technical Writing* (COMP 105 or placement); DDC GEWO ☐ **DDC course** (3) GESB See DDC master list for options	• Each student's pathway is unique and may differ slightly from this one • Please note that a course may fulfill multiple requirements; however, credit is only applied once. Using one course to fulfill multiple requirements may result in a deficiency in total credits

* denotes a corequisite course
Courses listed in parentheses () are prerequisites for the listed course

SEMESTER 5	SEMESTER 6	
☐ **CIS 450** (4) *Operating Systems* (CIS 310, CIS 350, IMSE 317*) ☐ **CIS 375** (4) *Software Engineering I* (COMP 270, CIS 350); DDC GEUW ☐ **CIS 298** (3) *Introduction to Python* Winter (CIS 200) ☐ **ECON 201** *Macroeconomics,* or **ECON 202** *Microeconomics* (3) (MATH 105 recommended); DDC GESB	☐ **CIS 427** (4) *Computer Networks* (IMSE 317, CIS 350) ☐ **Approved CIS Technical Elective** (3) See individual courses for pre-reqs ☐ **Approved CIS Technical Elective** (3) See individual courses for pre-reqs ☐ **Additional Lab Science** (4) Choose course in different subject area from Lab Science Sequence on the previous page. Options include: ASTR 130 + 131, GEOL 118, GEOL 218, CHEM 134, PHYS 125, PHYS 150	The Computer and Information Science (CIS) 4+1 option allows undergraduate Computer and Information Science students to earn both the BS in CIS and the MS in Computer and Information Science (MS-CIS), MS in Software Engineering (MS-SWE), MS in Artificial Intelligence (MSAI), MS in Cybersecurity and Information Assurance (MSCIA) or MS in Data Science (MS-DATA) in an accelerated format. Admitted students can double-count up to 9 credits of 500-level Computer and Information Science, Software Engineering, Artificial Intelligence, Cybersecurity and Information Assurance, and Data Science core, concentration/specialization/application or elective courses taken during their junior or senior years.
SEMESTER 7	**SEMESTER 8**	**NOTES**
☐ **CIS 4951** (2) *Senior Design I* (CIS 375, 427, 450); DDC GECC, GECE ☐ **CIS 479** (3)*Intro to Artificial Intelligence* (CIS 350 and IMSE 317 or STAT 325) ☐ **CIS 411** (3) *Intro Natural Language Processing* *Fall only* (CIS 350 or CIS 3501) ☐ **Approved CIS Technical Elective** (3) See individual courses for pre-reqs ☐ **Approved CIS Technical Elective** (3) See individual courses for pre-reqs	☐ **CIS 4952** (2) *Senior Design II* (CIS 4951); DDC GECC, GECE ☐ **CIS 481** (3) *Computational Learning* *(*CIS 306 *Math 227 *IMSE 317) ☐ **CIS 483** (3) *Deep Learning* (CIS 350) ☐ **Approved CIS Technical Elective** (3) See individual courses for pre-reqs ☐ **Approved CIS Technical Elective** (3) See individual courses for pre-reqs	**APPROVED LIST OF TECHNICAL ELECTIVES** **(18 credits required)** CIS 285 (3), CIS 316 (3), CIS 376 (4), CIS 381 (4,) CIS 387 (4), CIS 400 (4), CIS 405 (3), CIS 412 (3cr) *CIS 421 (4),*CIS 422 (3), CIS 425 (4), CIS 435 (3), CIS 436 (3), CIS 437 (3), CIS 439 (3), CIS 446 (3),CIS 447 (3), CIS 449 (3), CIS 451 (3), CIS 452 (3), CIS 467 (3), CIS 474 (3), CIS 476 (3), CIS 482 (3cr), CIS 4851 (3), CIS 487 (3), CIS 488 (3), CIS 489 (3), CCM 404 (3),CCM 472 (3), ENGR 299 (1cr), ENGR 399 (1), ENGR 499 (1cr), ENGR 400 (3), ENGR 492 (1-3), ENGR 493 (1-3), ENT 400 (3) * Credit cannot be earned for both CIS 421 and CIS 422 • Check design/tech courses' prerequisites, corequisites, course credit and schedule in DegreeWorks, the Undergrad Catalog and Browse Classes