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

Student name: ID #:

Sample Pathway to Bachelor of Science in *Software Engineering*, 120 total credits **Fall 2025**

| Semester 1 | Semester 2 | NOTES |
|---|---|---|
| ☐ **CIS 150** (4) *Computer Science I* (MATH 115*) | ☐ **CIS 200** (4) *Computer Science II* (CIS 150 'C-', MATH 115) | 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. |
| ☐ **COMP 105** (3) *Writing & Rhetoric I* DDC GEWO | ☐ **CIS 275** (4) *Discrete Structures I* (CIS 200*****, MATH 115) | For DDC requirements, please see the University's guidelines |
| ☐ **MATH 115** (4) *Calculus I* (MATH 105 'C-' or placement); DDC GEQT | ☐ **MATH 116** (4) *Calculus II* (MATH 115 'C-') | A course may have multiple requirements; however, **credit is only applied once**. Using one course to multiple requirements may result in a deficiency in total credits. |
| ☐ **DDC course** (3) GEHA | ☐ **DDC course** (3) GEHA | Each student's pathway is unique and may differ slightly from this one |
| | | See DDC master list for GESB/GEHA options |

| Semester 3 | Semester 4 | NOTES |
|---|---|---|
| ☐ **Lab Science Sequence I** (4) Choose from: BIOL 130, GEOL 118, CHEM 134, PHYS 125, PHYS 150; DDC GENS | ☐ **Lab Science Sequence II** (4) Same subject area as Sequence I: BIOL 320, GEOL 218, CHEM 136, PHYS 126, PHYS 151; DDC GENS | CIS Technical Electives and Application Area must total at least **14 credits** |
| ☐ **CIS 3501** (4) *Data Structures for SE* (MATH 115**,** CIS 200 'C-', CIS 275) | ☐ **CIS 285** (3) *Software Engineering Tools* (CIS 200*) | TECHNICAL ELECTIVES CIS 316 (3), CIS/IMSE 381 (4), CIS 387 (4), CIS 400 (4), CIS 405 (3), CIS 411 (3), CIS 412 (3), CIS 421 (4), CIS 422 (3), CIS 425, CIS 435 (3), CIS 436 (3), CIS 439 (3), CIS 437 (3), CIS 446 (3), CIS 447 (3), CIS 449 (3), CIS 451 (3), CIS 452 (3), CIS 467 (4), CIS 474 (3), CIS 479 (3), CIS 482 (3), CIS 4851 (3), CIS 487 (3), CIS 488 (3), CIS 489 (3), ECE 372 (4), ECE 473 (4), ENGR 360 (4), ENGR 399 (1), ENGR 492 (1-3), ENGR 493 (1-3) |
| ☐ **CIS 306** (4) *Discrete Structures II* (CIS 275) | ☐ **IMSE 317** (3) *Eng probability and Stats* (MATH 116) | |
| ☐ **MATH 227** (3) *Intro to Linear Algebra* (MATH 116 'C-) | ☐ **ECON 201** *Macroeconomics* (3) (MATH 105 recommended); DDC GESB | |
| | ☐ **COMP 270** (3) *Technical Writing* (COMP 105 or placement); DDC GEWO | |

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

| Semester 5 | Semester 6 | NOTES |
|---|---|---|
| ☐ **CIS 310** (4) *Assembly Language*<br>(MATH 115, CIS 200, CIS 275)<br>☐ **CIS 375** (4) *Software Engineering I*<br>(COMP 270, CIS 3501); DDC GEUW<br>☐ **Intersections** (3) GEIN<br>CIS 479, ENGR 400,<br>or ENT 400<br>See individual courses for pre-reqs<br>☐ **DDC course** (3) GESB | ☐ **CIS 427** (4) *Computer Networks*<br>(IMSE 317, CIS 3501)<br>☐ **OB 354** (3) *Organizational Behavior*<br>(55 credits); DDC GESB<br>☐ **CIS 376** (4) *Software Engineering II*<br>(CIS 375)<br>☐ **Additional Science Course** (4)<br>Choose course in different subject area from Lab Science Sequence on the previous page.<br>Options include: ASTR 130 + 131, GEOL 118, GEOL 218, CHEM 134, PHYS 125, PHYS 150 | **Only one of the following three courses can count towards your 120 credit hours for the Software Engineering Program:**<br>CIS 296 (3)<br>CIS 297 (3)<br>CIS 298 (3)<br><br>**Only one of the following three courses can count towards your technical electives:**<br>ENGR 360 (4) Design Innovations<br>ENGR 400 (3) Applied Bus Tech<br>ENT 400 (3) Intro to Entrepreneurship |

| Semester 7 | Semester 8 | NOTES |
|---|---|---|
| ☐ **CIS 4961** (2) *Senior Design I*<br>(CIS 376); DDC GECT<br>☐ **CIS 476** (3) *Softw Arch & Design Patterns*<br>(CIS 375)<br>☐ **General Elective** (3)<br>☐ **Application Area** (3)<br>☐ **CIS Technical Elective** (4)<br>See individual courses for pre-reqs | ☐ **CIS 4962** (2) *Senior Design II*<br>(CIS 4961, CIS 476*); DDC GECT, GECE<br>☐ **CIS 450** (4) *Operating Systems*<br>(CIS 310, CIS 3501, IMSE 317*)<br>☐ **Application Area** (4)<br>☐ **CIS Technical Elective** (3)<br>See individual courses for pre-reqs | **Application Area:** Pick ONE application sequence<br><br>**Web Engineering:**<br>CIS 421 (4)<br>CIS 435 OR CIS 436 (3)<br>**Game Design**<br>CIS 297 (3)<br>CIS 487 (3)<br>CIS 488 (3)<br>**Information Systems Sequence**<br>CIS 425 (4)<br>CIS 447 (3)<br>**Artificial Intelligence Sequence**<br>CIS 411 (3)<br>CIS 479 (3)<br>CIS 481 (3)<br>CIS Technical Electives and Application Area must total at least **14 credits** |