2022-2023 IE/CS Dual Degree Guidelines

Important Notes

- Declaration of a CS major or minor is necessary for students to enroll in many upper-level COMP_SCI courses.
- The MS in Computer Science requires 12 credits beyond the BSIE, assuming students complete the COMP_SCI core as part of the BSIE (which is a pre-requisite for the MS in Computer Science). More information about the BS/MS program can be found on the CS website.
- Students pursuing a CS major or minor should visit the [Computer Science Undergraduate website](#).
- The only courses in the dual degree that may be taken P/N (pass/fail) are theme courses.
- This information is intended only as a guide and does not replace any official communications from the CS department. Questions about the CS major should be directed to advising@cs.northwestern.edu.

Course	BS in Computer Science	BS in Industrial Engineering
☐ Math 220-1, 220-2, 228-1	Math	Math
☐ Math 228-2	Unrestricted Elective #1	Math
☐ COMP_SCI 212	Math (CS Core)	General Tech Elective #1
☐ EA 1, 2, 3	Engineering Analysis	Engineering Analysis
☐ EA 4	Unrestricted Elective #2	Engineering Analysis
☐ COMP_SCI 111	Engineering Analysis (CS Core)	IE Major Computing Requirement
☐ 4 units science	Basic Science	Basic Science
☐ DTC 1, 2	Design and Communication	Design and Communication
☐ Comm 102/Perf 103 or 203	Design and Communication	Design and Communication
☐ 7 units theme	Theme Requirement	Theme Requirement
☐ COMP_SCI 211	CS Core Major Requirement	General Tech Elective #2
☐ CIV_ENV 205	Unrestricted Elective #3	IE Major Requirement
☐ COMP_SCI 339	Breadth Requirement (Systems)	IE Major Computing Requirement (replaces COMP_SCI 217 by petition)
☐ IEMS 303	CS Major Requirement	IE Major Requirement
☐ IEMS 304	Unrestricted Elective #4	IE Major Requirement
☐ IEMS 313	Unrestricted Elective #5	IE Major Requirement
☐ COMP_SCI 213	CS Core Major Requirement	Unused Credit

Course	BS in Computer Science	BS in Industrial Engineering
☐ COMP_SCI 150	CS Core Major Requirement	IE Major Computing Requirement
☐ COMP_SCI 214	CS Core Major Requirement	General Tech Elective #3
☐ COMP_SCI 3XX	Breadth Requirement (Theory)	General Tech Elective #4
☐ COMP_SCI 3XX	Breadth Requirement (AI)	Unrestricted Elective #1
☐ COMP_SCI 3XX	Breadth Requirement (Interfaces)	Unrestricted Elective #2
☐ COMP_SCI 3XX	Breadth Requirement (Software)	Unrestricted Elective #3
☐ 6 credits COMP_SCI/COMP_ENG/ELEC_ENG 3XX	CS Technical Electives	6 Additional Courses
☐ 2 COMP_SCI 399/Project course	Project Requirement	Unrestricted Electives #4-#5
☐ IEMS 202	1 Additional Course	IE Major Requirement
☐ IEMS 315, 317	Advanced Electives #1-2	IE Major Requirements
☐ IEMS 38X	Advanced Elective #3	IE Major P&L Requirement
☐ IEMS 394	Unused Credit	IE Major Requirement
☐ 2 MS electives	2 Additional Courses	MS Electives #1-#2
☐ 3 IE/OR Electives	3 Additional Courses	IE/OR Electives #1-#3

Additional Curricular Notes:

- Students unable to register for COMP_SCI 339 will be required to take COMP_SCI 217 to fulfill requirements for the BS in industrial engineering. This requirement will not be waived. Computer Science makes no guarantees about any student's ability to register for COMP_SCI 339.
- Details on courses used to fulfill the CS tech electives are found in the undergraduate catalog.
- The McCormick requirement for dual degrees is to complete 54 (total) credits. Completing a dual degree in IE/CS will require 55 or 56 credits—7 or 8 credits beyond the 48 required for the BS in industrial engineering, depending on whether or not COMP_SCI 339 can be applied towards the IE computing requirement.