*Unofficial Document – updated 9/1/2023 For Advising Purposes Only*

**2024-2025 IE Major / CS Minor Guidelines**

**Important Notes**

* Declaration of a CS major or minor is necessary for students to enroll in many upper-level COMP\_SCI courses.

To declare the McCormick CS minor, students should submit the minor declaration form in McCormick Advising System (MAS) by the end of their junior year.

* Students pursuing a CS major or minor should visit the [Computer Science Undergraduate website](https://www.mccormick.northwestern.edu/computer-science/undergraduate/bachelors/).
* All courses used towards the CS minor must be taken for a letter grade (not P/N).
* This information is intended only as a guide and does not replace any official communications from the CS department. Questions about the CS minor should be directed to advising@cs.northwestern.edu.
* At least four minor courses must not be applied to any major requirements.

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| **Course** | **Minor in Computer Science** | **BS in Industrial Engineering** |
| * Math 220-1, 220-2, 228-1
 | Prerequisite | Math requirement |
| * Gen\_Eng 205-1,2, 3

(EA 1, 2, 3) | Prerequisite | Engineering Analysis requirement |
| * COMP\_SCI 111
 | Core | IE Major Computing Requirement |
| * COMP\_SCI 150
 | Core | IE Major Computing Requirement |
| * COMP\_SCI 211
 | Core | Unrestricted Elective #1 |
| * COMP\_SCI 212
 | Core | Unrestricted Elective #2 |
| * COMP\_SCI 213
 | Core | Unrestricted Elective #3 |
| * COMP\_SCI 214
 | Core | Unrestricted Elective #4 |
| * COMP\_SCI 339
 | Breadth Requirement (Systems) | Major Requirement (replaces CS 217 by petition) |
| * COMP\_SCI 3XX
 | Breadth Requirement (see below) | General Tech Elective #1 |
| * COMP\_SCI 3XX
 | Breadth Requirement (see below) | General Tech Elective #2 |

**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.
* Courses taken to fulfill breadth requirements must come from three different areas (Theory, Systems, Artificial Intelligence, Interfaces, and Software Development/Programming Languages).
* Completing a CS minor will fill 2 of 4 general technical electives, the 3 computing courses, and 4 of 5 unrestricted electives in the 48 units needed for the IE degree. Inability to take COMP\_SCI 339 to replace COMP\_SCI 217 will fill an additional unrestricted elective upon completing the CS minor.