

# Computer Science Pathway Winter Term Start (4 Year Sample Path)

Updated July 2022 to support recommended CS322 & Ethics, Concentrations, CS Early Start M.S., CS Accelerated Master's Program, OR Major Transfer Map

|            | Fall Term  | Winter Term                                   | Spring Term  |  |
|------------|--|---|--|--|
| Year 1 (1) | CS 122<br>Intro to Programming   | CS 210<br>Computer Science I                  | CS 211<br>Computer Science II  |  |
|            | MATH 112<br>Elementary Functions   | MATH 251 or 261 or 246<br>Calculus I          | MATH 252 or 262 or 247<br>Calculus II  |  |
|            | WR 121<br>College Composition I  | WR 122<br>College Composition II              | Core Ed (Arts & Letters)   |  |
|            | Core Ed (Social Science)   | Core Ed (Arts & Letters)                      | Core Ed (Social Science)   |  |
| Year 2 (2) | CS 212<br>Computer Science III   | CS 314<br>Computer Organization               | CS 322 Intro to Software Eng (4) or<br>WR 320 or 321<br>Sci & Tech or Bus Comm | Summer Internship<br>or Research Opportunity (5) |
|            | MATH 231<br>Discrete Math I  | Math 232<br>Discrete Math II                  | Math Choice Group  |  |
|            | Science/Minor (3)  | Science/Minor (3)                             | Science/Minor (3)  |  |
|            | Core Ed (Arts & Letters)   | Core Ed (Social Science<br>AND Multicultural) | Core Ed (Arts & Letters<br>AND Multicultural)                                  |  |
| Year 3 (6) | CS 313<br>Int. Data Structures   | CS 315<br>Intermediate Algorithms             | CS Upper Division elective<br>(7) (8)  | Summer Internship<br>or Research Opportunity (5) |
|            | CS 322 Intro to Software Eng (4) or<br>WR 320 or 321<br>Sci & Tech or Bus Comm | CS 330<br>C/C++ and Unix                      | CS 415<br>Operating Systems  |  |
|            | Math Choice Group  | Math Upper Division<br>Elective               | PHIL 223 Data Ethics (9) or<br>other Social Science Core Ed                    |  |
|            | Minor/UO Elective  | Minor/UO Elective                             | Minor/UO Elective  |  |
| Year 4     | CS 425<br>Principles of Prog Lang  | CS 422<br>Software Methodology I (12)         | CS Upper Division Elective<br>(12) (13)  |  |
|            | CS Upper Division Elective<br>(7) (10)   | CS Upper Division Elective<br>(10) (12)       | CS Upper Division Elective<br>(10) (12)  |  |
|            | UO Elective (11)   | UO Elective (11)                              | UO Elective  |  |

## Math Core Requirements

Students must take Discrete Mathematics 231 and 232, and two terms of Calculus (I and II). In addition, students must take two of the following:

- *Choose 1:* [MATH 253 Calculus III OR MATH 263 Calculus with Theory III]
- MATH 341 Linear Algebra I
- *Choose 1:* [MATH 343 Statistical Models/Methods OR MATH 345M Probability and Statistics for Data Science OR MATH 425 Statistical Methods I]

## Laboratory Science Requirements

Students must complete one three-term sequence chosen from the following:

- General Physics: PHYS 201, 202, 203
- Foundations of Physics: PHYS 251, 252, 253
- General Chemistry: CH 221, 222, 223
- Honors General Chemistry: CH 224H, 225H, 226H
- Geological Sciences: GEOL 201, 202, 203 (ERTH 201, 202, 203)
- Geography: GEOG 141, *choose 2:* [GEOG 321, GEOG 322, GEOG 323]
- Biology: *choose 1:* [CH 111, CH 113, CH114, CH 221, CH 224H], BI 211, *choose 1:* [BI 212, BI 213]
- Psychology: PSY 201, *choose 2:* [PSY 301, PSY 304, PSY 305, PSY 348]

## Notes

- (1) Check out CS and UO student organizations (see <https://cs.uoregon.edu/activities/student-groups>).
- (2) Schedule a major progress review advising appointment for upper-division majors (see <https://cs.uoregon.edu/undergraduate/computer-science-advising>).
  - . Attend CS 407 Career/Internship seminar (Mondays during the academic year 3:30-4:50 p.m.; all are welcome).
  - . Begin to explore summer internship or Research Experience for Undergrads (search on “NSF REU Computer Science”) plans.
- (3) A *computing-related* minor may substitute for science sequence with approved petition.
- (4) CS 322 recommended, else UO elective
- (5) 401/404 cr. is possible – 404 cr. may be combined with CS 407 Career/Internship seminar credit
- (6) Check out CS student organizations; attend CS Career/Internship seminar; plan for summer internship or REU.
- (7) possible Computer Science Early Start M.S. Course
- (8) possible individual study course (e.g., CS 401, 403)
- (9) PHIL 223 Data Ethics recommended, else other Social Science core ed
- (10) possible concentration (formerly track) course; must be numbered 410 or higher
- (11) upper-division if needed to meet UO graduation requirements
- (12) possible CS Accelerated M.S. Program (AMP) course
- (13) possible capstone (CS 423) or individual study course (e.g., CS 401, 403)