

# Computer Science B.S. Degree – Suggested 4.5-year Plans

**Track A:** Students who start with CS 1420 and Calculus I.

|  | FALL semester                             |   | SPRING semester                          |   |
|--|---|---|--|---|
| <b>Freshman year<br/>(28 credits)</b>  | CS 1420: Accelerated Object-Oriented Prog | 4 | CS 2420: Intro to Algs & Data Structures | 4 |
|  | MATH 1210: Calculus I†                    | 4 | MATH 1220: Calculus II†                  | 4 |
|  | Gen Ed†                                   | 3 | WRTG 2010: Intermediate Writing†         | 3 |
|  | Gen Ed†                                   | 3 | Gen Ed†                                  | 3 |
| <b>Sophomore year<br/>(26 credits)</b> | CS 2100: Discrete Mathematics             | 3 | CS 3200: Sci Comp* or CS Elective        | 3 |
|  | CS 3500: Software Practice I              | 4 | CS 3505: Software Practice II            | 3 |
|  | American Institutions (AI)†               | 3 | MATH 2270: Linear Algebra                | 4 |
|  | Gen Ed (DV)†                              | 3 | WRTG 3014 or 3015†                       | 3 |
| <b>Junior year<br/>(25 credits)</b>    | CS 3100: Models of Comp* or CS Elective   | 3 | CS 4400: Computer Systems                | 3 |
|  | CS 3130: Engineering Prob & Stats         | 3 | CS Elective                              | 3 |
|  | CS 3810: Computer Organization            | 4 | CS Elective                              | 3 |
|  | Gen Ed (IR, 3000+)†                       | 3 | Math/Science Elective†                   | 3 |
| <b>Senior year<br/>(28 credits)</b>    | CS 4150: Algorithms                       | 3 | CS 4000 (Project)‡ or CS 4940 (Thesis)   | 3 |
|  | CS Elective                               | 3 | CS Elective                              | 3 |
|  | CS Elective                               | 3 | PHYS 2210: Physics for Scientists & Eng† | 4 |
|  | Gen Ed (3000+)†                           | 3 | Math/Science Elective†                   | 3 |
|  | Free Elective, if needed                  | 3 |  |   |
| <b>Fifth year<br/>(15 credits)</b>     | CS 4500 (Project)‡ or CS 4970 (Thesis)◊   | 3 |  |   |
|  | CS Elective                               | 3 |  |   |
|  | Free Elective, if needed                  | 3 |  |   |
| <b>122 credits total</b>               | Free Elective, if needed                  | 3 |  |   |
|  | Free Elective, if needed                  | 3 |  |   |

**Track B:** Students who start with CS 1400 and Precalculus.

|  | FALL semester                            |   | SPRING semester                        |   |
|--|--|---|--|---|
| <b>Freshman year<br/>(28 credits)</b>  | CS 1400: Intro to Computer Programming   | 3 | CS 1410: Intro to Object-Oriented Prog | 4 |
|  | MATH 1080: Precalculus                   | 5 | MATH 1210: Calculus I†                 | 4 |
|  | Gen Ed†                                  | 3 | WRTG 2010: Intermediate Writing†       | 3 |
|  | Gen Ed†                                  | 3 | Gen Ed†                                | 3 |
| <b>Sophomore year<br/>(29 credits)</b> | CS 2420: Intro to Algs & Data Structures | 4 | CS 2100: Discrete Mathematics          | 3 |
|  | MATH 1220: Calculus II†                  | 4 | CS 3500: Software Practice I           | 4 |
|  | PHYS 2210: Physics for Scientists & Eng† | 4 | MATH 2270: Linear Algebra              | 4 |
|  | Gen Ed (DV)†                             | 3 | WRTG 3014 or 3015†                     | 3 |
| <b>Junior year<br/>(25 credits)</b>    | CS 3100: Models of Comp* or CS Elective  | 3 | CS 3130: Engineering Prob & Stats      | 3 |
|  | CS 3505: Software Practice II            | 3 | CS 3200: Sci Comp* or CS Elective      | 3 |
|  | CS 3810: Computer Organization           | 4 | CS 4400: Computer Systems              | 3 |
|  | Gen Ed (IR, 3000+)†                      | 3 | Math/Science Elective†                 | 3 |
| <b>Senior year<br/>(24 credits)</b>    | CS 4150: Algorithms                      | 3 | CS 4000 (Project)‡ or CS 4940 (Thesis) | 3 |
|  | CS Elective                              | 3 | CS Elective                            | 3 |
|  | CS Elective                              | 3 | CS Elective                            | 3 |
|  | Gen Ed (3000+)†                          | 3 | Math/Science Elective†                 | 3 |
| <b>Fifth year<br/>(16 credits)</b>     | CS 4500 (Project)‡ or CS 4970 (Thesis)◊  | 3 |  |   |
|  | CS Elective                              | 3 |  |   |
|  | CS Elective                              | 3 |  |   |
| <b>122 credits total</b>               | American Institutions (AI)†              | 3 |  |   |
|  | Free Elective, if needed                 | 4 |  |   |

† Honors options available, see <https://honors.utah.edu/> for details.

‡ Project Students pursuing the Honors degree must take CS 4998 concurrently with CS 4500 to satisfy the Honors Thesis Work.

◊ Thesis Students pursuing the Honors degree must take CS 4999 (instead of CS 4970) to satisfy the Honors Thesis Work.

\* Students may choose between CS 3100 (FALL semesters) or CS 3200 (SPRING semesters) to satisfy the Theory Restricted Elective.