

# Computer Science (Data Science Option) Graduation Requirements

University of Washington

The graduation requirements shown below are subject to change.

For more information, see the CSE undergraduate webpages at  
[http://www.cs.washington.edu/students/ugrad/degree\\_requirements/](http://www.cs.washington.edu/students/ugrad/degree_requirements/)

## General Education Component

### Language Skills (5-20 credits)

- \*English Composition (5)
- Foreign Language through 3<sup>rd</sup> quarter (0-15)

### Diversity Requirement (3 credits)

- UW Diversity Requirement (may overlap with Areas of Knowledge Requirement) (3)

### Reasoning and Writing in Context (15 credits)

- Quantitative/symbolic reasoning (5)
- UW approved writing course (W courses) and/or additional composition (10)

Note: These courses may double count as Areas of Knowledge requirements. All students will meet the Quantitative/symbolic reasoning requirement via MATH124 or 134 as required below.

### Areas of Knowledge (75 credits)

- Visual, Literary, and Performing Arts (20)
- Individuals and Societies (20)
- The Natural World (20)
- Additional coursework (15)

Note: For most students, the Math & Science Component plus CSE142 & 143 will completely satisfy the “Natural World” and “Additional Coursework” requirements.

## Mathematics & Science Component

### Mathematics (15-18 credits)

- \*MATH 124, 125, 126 or 134, 135, 136 (honors) (15)  
Calculus with Analytical Geometry
- MATH 308 (waived if 136 taken) (3)

### Natural Science (10 credits)

- \*PHYS 121, CHEM 142, BIOL 180, or any course (5)  
from the list of [approved natural science courses](#) on the CSE website.
- Five additional credits of natural science (5)  
from the [approved list](#)

## Computer Science Component

### Required (29 credits)

- \*CSE 142 Computer Programming I (4)
- \*CSE 143 Computer Programming II (5)
- CSE 311 Foundations of Computing I (4)
- CSE 312 Foundations of Computing II (4)
- CSE 331 Software Design & Implementation (4)
- CSE 332 Data Abstractions (4)
- CSE 351 The Hardware/Software Interface (4)

### Data Science Electives (35 credits)

Select at least 35 additional credits from courses on the approved CSE Electives list, including at least

- SOC 225 Data and Society (3/5)
- CSE 421 Intro to Algorithms (3)
- CSE 444 Database Internals (4)
- CSE 446 Machine Learning (4)
- CSE 442 Data Visualization (4)
- 1 additional course chosen from the [Data Science Electives](#) (4)
- 1 additional course from the CSE [Core Courses](#) list (3-4)
- Either 1 additional course from the CSE Core Courses list or 1 course from the CSE [Capstone list](#) on the CSE website (3-4)
- Additional courses from either the CSE [Core Courses](#) list or the [CSE Elective list](#) to bring total CSE Elective credits to 35 (3-7)

**Free Electives to bring total credits up to the 180  
required for graduation**