

Computer Engineering Graduation Requirements

University of Washington

The graduation requirements shown below are subject to change.

For more information, see the CSE Undergraduate Website, available at
http://www.cs.washington.edu/students/ugrad/degree_requirements/

General Education Component

Written & Oral Communication (12 credits)

- *English Composition (5)
- HCDE 231 Intro. to Technical Writing (3)
- Approved UW Writing or Composition Course (4)

Diversity Requirement (3 credits)

- UW Diversity Requirement (3)

Areas of Knowledge (30 credits)

- Visual, Literary, and Performing Arts (10-20)
- Individuals and Societies (10-20)

Mathematics & Science Component

Mathematics & Natural Sciences (41 credits)

- *MATH 124, 125, 126 or 134, 135, 136 (15)
Calculus with Analytical Geometry
- MATH 308 or 318 (waived if 136 taken) (3)
Matrix / Linear Algebra
- *PHYS 121 Mechanics (5)
- PHYS 122 Electromagnetism & (5)
Oscillatory Motion
- [10 additional credits from the list of approved natural science courses on the CSE website](#) (10)
- 3 to 6 additional credits of Math/Science (to bring the total to 41) [chosen from approved natural science courses](#) on the CSE website, STAT 390, 391, 394, MATH 307, 309, 334, 335, and AMATH 351, 353. (3-6)
(STAT 391 recommended.)

* Denotes prerequisites (must be fully completed before application date).

The minimum acceptable grade for any course in the Mathematics & Science or Computer Engineering Components, or UW requirements is a 2.0.

Computer Engineering Component

Required (36 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 332 Data Abstractions (4)
- EE 205 Intro to Signal Conditioning (4)
or EE 215 Intro to Electrical Engineering
- CSE 351 The Hardware/Software Interface (4)
- CSE 369 Introduction to Digital Design (2)
- CSE/EE 371 Design of Digital Circuits & Systems (5)

CE Senior Electives (36 credits)

Select enough additional credits from the lists of approved courses on the CSE website, including at least

- One course chosen from: (4)
CSE 403, CSE/EE 474, or CSE 484
- 3 additional courses chosen from the (12-15)
[Computer Engineering Systems Electives list](#) on the CSE website
- 2 additional courses from the [CSE Core Courses list](#) on the CSE website (6-10)
- a [Design Capstone course](#) from the approved (5)
list on the CSE website
- 4 credits of College of Engineering courses from (4)
the [CSE elective list](#) on the CSE website
- Additional courses from the [CSE Electives](#) (0-5)
list on the CSE website, to bring the total CSE
Elective credits to 36.

Additional Engineering credits to bring the total Engineering credits to 36, not including the required section above (0-5 credits)

Free Electives to bring total credits up to the 180 required for graduation (20-25 credits)

Computer Science Graduation Requirements

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http://www.cs.washington.edu/students/ugrad/degree_requirements/

General Education Component

Language Skills (5-20 credits)

- *English Composition (5)
- Foreign Language through 3rd 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 or 318 (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)

CS Senior Electives (33 credits)

Select at least 33 additional credits from courses on the approved CSE Electives list, including at least

- Four, 400-level courses from the [CSE Core Courses](#) (12-16)
- Two additional [CSE Core Courses](#) (300 or 400 level) (6-8)
- Either 1 additional course from the CSE Core Courses list or 1 course from the CSE [Capstone list](#) on the CSE website (3-5)
- Additional courses from either the CSE [Core Courses](#) list or the [CSE Elective list](#) to bring total CSE Elective credits to 33 (4-12)

Free Electives to bring total credits up to the 180 required for graduation (20-45 credits)

The minimum grade required for math, science, language, reasoning and writing in context, CSE Electives and Computer Science required coursework is a 2.0. A student's cumulative GPA must not fall below a 2.0.