# Computer Engineering Graduation Requirements

## University of Washington

The graduation requirements shown below are subject to change.

**For more information, see the Undergraduate Handbook, available online at**
**http://www.cs.washington.edu/education/ugrad/current/degree_requirements.html**

## General Education Component

### Written & Oral Communication   (12 credits)

- ❑   **\*English Composition                              (5)
- ❑   TC 231 Intro. to Technical Writing              (3)
- ❑   TC 333 Adv. Tech. Writing & Oral Pres.      (4)

### Areas of Knowledge    (30 credits)

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

## Mathematics & Science Component

### Mathematics    (19-22 credits)

- ❑   **\*Math 124, 125, 126 or 134, 135, 136 (honors)   (15)
     Calculus with Analytical Geometry
- ❑   Math 308 or 318 (waived if 136 taken)        (3)
- ❑   Stat 390, 391, or 394&395                        (4)
         -extra 2 credits from 394/395 count as
          CSE senior elective credits

### Natural Sciences    (20 credits)

- ❑   **\*Phys 121  Mechanics                              (5)
- ❑   **\*Phys 122  Electromagnetism &
                 Oscillatory Motion                       (5)
- ❑   10 additional credits from the list              (10)
     of approved natural science courses in the
     CS&E Handbook

**\* Denotes prerequisites (must be fully completed before application date).   Regardless of AP credit, at least one calculus or post-calculus math course and one approved natural science course must be completed prior to applying to the department.**

## Computer Engineering Component

### Required    (47 credits)

- ❑   **\*CSE 142  Computer Programming I            (4)
- ❑   **\*CSE 143  Computer Programming II           (5)
- ❑   CSE 303 Concepts & Tools for Soft. Dev.    (3)
- ❑   CSE 321  Discrete Structures                     (4)
- ❑   CSE 322  Intro to Formal Models               (3)
- ❑   CSE 326  Data Structures                         (4)
- ❑   CSE 341  Programming Languages               (4)
- ❑   CSE 370  Intro to Digital Design               (4)
- ❑   CSE 378  Machine Org & Assembly Lang.      (4)
- ❑   EE 215  Intro to Electrical Engineering        (4)
- ❑   CSE 451  Operating Systems                      (4)
- ❑   CSE 461  Intro to Networks                       (4)

**Students must complete either the hardware or the software specialization.**

### Hardware Specialization    (28 credits)

- ❑   EE 233 Circuit Theory                              (5)
- ❑   CSE 466  Software for Embedded Systems     (4)
- ❑   CSE 467  Advanced Digital Design              (4)
- ❑   CSE 471  Computer Design and Organization (4)
- ❑   Hardware Design Capstone from the list of    (5)
     approved courses in the CS&E Handbook
- ❑   At least 6 credits from courses on the          (6)
     the approved Computer Engineering senior
     elective course list in the CS&E Handbook

### Software Specialization    (27 credits)

- ❑   CSE 403  Software Engineering                   (4)
- ❑   18 credits from the approved  Computer       (18)
     Engineering senior elective course list in the
     CS&E Handbook, including at least three
     courses from CSE 401, 421, 444, 466, 471, 484
- ❑   Software Design Capstone from the list of      (5)
     approved courses in the CS&E Handbook

### Free Electives to bring total credits up to the 180 required for graduation   (21-25 credits)

The minimum acceptable grade for any course in the Mathematics & Science or Computer Engineering Components, or in Written & Oral Communication, is 2.0. A student's overall GPA must not fall below a 2.0.

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