Computer Engineering Hardware Specialization 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)
- ❑ HCDE 231 Intro. to Technical Writing   (3)
- ❑ HCDE 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 & 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 &
  Oscillatory Motion   (5)
- ❑ 10 additional credits from the list of approved   (10)
  natural science courses in the CSE Handbook
- ❑ 3 to 6 additional credits of Math/Science (to   (3-6)
  bring the total to 41) chosen from approved
  natural science courses in the CSE Handbook,
  STAT 390, 391, 394, MATH 307, 309, 334,
  335, and AMATH 351, 353.
  (STAT 391 recommended.)

* 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.

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.

Computer Engineering Component

Required   (41 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 Programming Abstractions   (4)
- ❑ CSE 351 The Hardware/Software Interface (4)
- ❑ CSE 352 Hardware Design &   (4)
     Implementation
- ❑ EE 215 Intro to Electrical Engineering   (4)
  or EE 2XX Intro to Signal Conditioning
- ❑ CSE 451 Operating Systems   (4)
- ❑ CSE 461 Intro to Networks   (4)

Note: The requirements above and in the left column are the same as for the software specialization.

Hardware Specialization   (28-29 credits)

- ❑ EE 233 Circuit Theory if EE 2XX not taken   (0-5)
- ❑ CSE 333 Systems Programming   (4)
- ❑ 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 CSE Handbook
- ❑ If EE 233 is taken: at least 3 credits chosen   (0-3)
  from courses on the CSE Electives list in the
  CSE Handbook
- ❑ If EE 2XX is taken: at least 7 credits chosen   (0-7)
  from courses on the CSE Electives list in the
  CSE Handbook, including at least 3 CSE/EE credits

Additional Engineering credits to bring the total Engineering credits to 31 *not including the Required section above* (2-7 credits)

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