**CSE Elective Courses**

A CSE elective is a course that has a significant overlap with computer science and engineering, either because it focuses on a significant application or use of computers, it focuses on an underlying technology for computers or communication, or it develops a conceptual or formal framework useful in doing computer science and engineering.

Courses not on this list may be applied toward CSE (senior) electives if approved by the CSE Undergraduate Faculty Advisor. If you would like to petition to have a class count toward (senior) electives, please contact the [undergrad advisers](mailto:ugrad-adviser@cs.washington.edu).

*Note: Computer Engineering majors may not use the same course to satisfy Math/Science Electives and Computer Engineering or Free Electives*

**CSE**

369    Intro to Digital Design (3)  
Any course on the CSE Core Course List  
Any graded 400-level majors course (includes 498 & 496 but not 499))  
480    Computer Ethics (2)  
Up to 2 credits max of CSE 301, ENGR 321, General Studies 350 and/or CSE 492.

**AMATH**

401    Vector Calculus & Complex Variables (4)  
402    Introduction to Dynamical Systems & Chaos (4)  
403    Methods for Partial Differential Equations (4)  
422    Introduction to Mathematical Biology (3)  
423    Mathematical Biology: Stochastic Models (3)  
483    High-Performance Scientific Computing (5)

**BIOEN**

485     Computational Bioengineering (4)

**DXARTS/MUSIC**

460  Digital Sound (5)  
461-463    Digital Sound Synthesis, Digital Sound Processing, Advanced Digital Sound Synthesis and Processing (5, 5, 5). Offered jointly with Music 401-403.

**EE**

331, 332    Devices and Circuits I & II (5, 5)  
341    Discrete Time Linear Systems (5)  
400-level    Any graded 400-level majors course with the exception of: EE 406, 452-457, 471, 472, 478, and 491.

**ENGR**

321    Engineering Internship Education (one credit may count per quarter, up to two credits total)

**GEOG**

360    Principles of GIS Mapping (5)  
460    GIS Analysis (5)  
463    GIS Workshop (5)  
465    GIS Database & Programming (5)

**INFO**

444    Value-Sensitive Design (5) (Effective Autumn 2018, this course will change to INFO 464)  
446    Advanced Search Engine Systems (5)  
454    Information Policy: Domestic and Global (5)

**LING**

472    Introduction to Computational Linguistics (5)

**MATH**

307    Differential Equations (3) - NOTE: Once Math 307 becomes 207, it will no longer be a CSE senior elective course.  
318     Advanced Linear Algebra Tools and Applications (3)  
334, 335, 336    Accelerated Advanced Calculus (5,5,5)  
402, 403, 404    Introduction to Modern Algebra  (3, 3, 3)  
407    Linear Optimization (3)  
408    Nonlinear Optimization (3)  
409    Discrete Optimization (3)  
414, 415    Number Theory (3,3)  
424, 425, 426    Fundamental Concepts of Analysis (3,3,3)  
435, 436    Introduction to Dynamical Systems (3,3)  
441    Topology (3)  
442    Differential Geometry (3)  
461, 462    Combinational Theory (3,3)  
464, 465, 466    Numerical Analysis I, II, III (3, 3, 3)

**MUSIC**

400    Computer Music Seminar (3, max 9)

**STAT**

341, 342    Introduction to Probability and Statistical Inference I, II (4,4)  
421    Introduction to Applied Statistics and Experimental Design (4)  
391    Probability and Statistics for Computer Science (also counts as CSE core) (4)

**STAT/MATH**

395, 396    Probability II & III (3,3)  
491    Introduction to Stochastic Processes (3)