

## MS CS Secondary Depth Requirements

### 1. Artificial Intelligence

Students with a secondary concentration in AI take five courses satisfying the area (a) and (b) requirements below. Students waiving out of CS221 may take an additional course in either area (b) or (c):

- a) CS 221\*\*
- b) At least four of: 223A, 224M, 224N, 224S, 224U, 224W, 226, 227, 228, 229, 231A
- c) Sufficient depth units from category (b) and the following: CS 124, 205A, 222, 225A, 225B, 227B, 228T, 229A, 229T, 231B, 235, 246, 262, 270, 173 or 273A, 274, 275, 276, 277, 278, 279, 294A\*, 321, 322, 327A, 328, 329, 331, 334A or EE364A, 341, 345, 364A, 364B, 374, 377\*, 379\*, 393\*, 395\*, 399\*; Elect. Eng. 263, 363, 364B, 376A; Engr. 205, 209A; Man. Sci. 251, 252, 339, 351, 352, 353; Psych. 202, 205; Stat. 202, 315A, 315B

### 2. Biocomputation

Students with a secondary concentration in Biocomputation need to take five courses. Three of those courses must come from area (a) and the remaining two courses may come from either area (a) or (b):

- a) At least three of: CS 262, 270, 272, 173 or 273A, 274, 278, 279
- b) Sufficient depth units from category (a) and the following: CS 228, 229, 229A, 245, 246, 261, 268, 275, 277, 341, 345, 346, 365, 374, 393\*, 395\*, 399\*; BIOC 218; Genetics 203, 211; SBIO 228

### 3. Computer and Network Security

Students with a secondary concentration in Computer and Network Security need to take five courses. Those courses must satisfy the area (a) requirement and additional courses from area (b) should be taken if any area (a) requirements are waived:

- a) All of: CS 140\*\*, 144\*\*, 155, 244, 255
- b) Sufficient depth units from category (a) and the following: CS 142, 240, 241, 244B, 244C, 259, 261, 340, 344, 355, 365

### 4. Human-Computer Interaction

Students with a secondary concentration in Human-Computer Interaction need to take five courses as follows: one course each from areas (a), (d), (e), and (f), and then one course from either area (b) or (c). Students waiving out of the area (a) requirement should take one additional course from areas (b)-(g):

- a) CS 147\*\*
- b) One of: CS 247, 294H
- c) One of: CS 376, 378, 448B
- d) One of: CS 124, 142, 148
- e) One of: CS 303; Comm 206, 268; Psych 110, 252, 254; Soc 257
- f) One of: ArtStudio 160; ME 203, 216A, 377; any d.school course
- g) One of more courses from areas (b) through (f), or the following: Art 260; CS 229, 229A, 242, 246, 248, 295, 341, 393\*, 395\*, 399\*, 476A, or any d.school class listed at <http://dschool.stanford.edu>, or any HCI class listed at <http://hci.stanford.edu/courses/> noted as counting toward the MS CS degree. Such courses must be numbered 100 or above and be taken for at least 3 units to count for this requirement.

### 5. Information Management and Analytics

Students with a secondary concentration in Information Management and Analytics need to take five courses satisfying the area (a) and (b) requirements below. Students waiving out of the area (a) requirement should take an additional course from either area (b) or (c) in its place:

- a) CS 145\*\*
- b) At least four of: CS 224N, 224W, 229, 245, 246, 276, 345, 346, 347
- c) Sufficient additional units selected from category (b) and the following: CS 224S, 224U, 228, 228T, 229A, 229T, 231A, 240, 242, 243, 244, 244B, 244C, 249A, 249B, 255, 262, 270, 271, 272, 173 or 273A, 274, 275, 279, 315A or 316, 321, 341, 344, 364B, 374, 393\*, 395\*, 399\*; Stat. 315A, 315B

## 6. Mobile and Internet Computing

Students with a secondary concentration in Mobile and Internet Computing need to take five courses satisfying the area (a) through (d) requirements below. Students waiving out of an area (a) requirement should take an additional course from areas (a) through (c):

- a) Two of: CS 140\*\*, 144, 244
- b) One of: CS 142, 147, 247
- c) One of: CS 155, 255
- d) CS 294S (for 2012-13, CS 376 will satisfy this requirement)

## 7. Real-World Computing

Students with a secondary concentration in Real-World Computing need to take 5 courses satisfying the area (a) and two of the three courses in the area (b) requirements below (i.e., three courses in area (a) and two courses in area (b)):

- a) At least three of: CS 148, 223A, 231A, 248
- b) At least two of: CS 205A, 205B, 226, 249A, 249B, 262, 268, 277, 348A, 348B, 374; CME 302, 306, 326

## 8. Software Theory

Students with a secondary concentration in Software Theory need to take 5 courses satisfying the area (a)-(d) requirements below (i.e., two courses in area (a) and one course each in areas (b)-(d)):

- a) CS 242, 243
- b) At least one of: CS 241, 258, 259
- c) At least one of: CS 244, 245, 295, 341, 343, 345
- d) At least one of the following: CS 255, 261, 268, 355, 361A, 361B, 365

## 9. Systems

Students with a secondary concentration in Systems need to take five courses. Those courses must satisfy the area (a) requirement and additional courses may be taken from area (b):

- a) CS 140\*\*, 144\*\*, 240, 242
- b) At least three of: CS 243, 244, 245, 248, 348B; Elect. Engr. 271, 282

## 10. Theoretical Computer Science

Students with a secondary concentration in Theoretical Computer Science need to take 5 courses satisfying the area (a) and (b) requirements below (i.e., two courses in area (a) and three courses in area (b)):

- a) CS 241 or 258 or 259, 261 (361A or 361B may be used as substitutes for 261)
- b) Sufficient additional units selected from: CS 228, 241, 246, 254, 255, 258, 259, 262, 268, 334A or EE364A, 341, 345, 355, 356, 357, 358, 359\*, 361A, 361B, 364A, 364B, 365, 366, 369\*, 374, 393\*, 395\*, 399\*, 468; Man. Sci. 310

Note: Multiple CS359, CS369, and/or CS468 courses may be taken as long as they are each on different topics (denoted by different letter suffixes for the courses).

\* With consent of advisor.

\*\* Students with equivalent coursework may waive with the approval of their advisor.