

# DEPARTMENT OF COMPUTER SCIENCE

## MSCS Program Sheet (2016-17)

### Software Theory Specialization: Single Depth

Name: \_\_\_\_\_ Adviser: \_\_\_\_\_ Date: \_\_\_\_\_  
 Student ID#: \_\_\_\_\_ Email: \_\_\_\_\_ Proposed date for degree conferral: \_\_\_\_\_ HCP? \_\_\_\_\_ Coterm? \_\_\_\_\_

**GENERAL INSTRUCTIONS**

Before the end of your first quarter, complete this program sheet by filling in the number, name and units of each course you intend to take for your degree. Meet with your adviser to secure the necessary signature; submit original to the MS Program Administrator in Gates 182. Program sheets, as well as foundation course waiver forms, may be submitted electronically on the Gates Information Network at <http://gin.stanford.edu/> (click on 'Dashboard'). See <http://cs.stanford.edu/degrees/mscs/programsheets/psguide1617.pdf> for detailed instructions.

**FOUNDATIONS REQUIREMENT**

You must satisfy the requirements listed in each of the following areas; all courses taken elsewhere must be approved by your adviser on a foundation course waiver form. Do not enter anything in the "Units" column for courses taken elsewhere.

Note: If you are amending an old program sheet, enter "on file" in the approval column for courses that have already been approved.

Required:	Equivalent elsewhere (course numbers/titles/institution)	Approval	Grade	Units
Logic, Automata & Complexity (CS103)				
Probability (CS109, Stat116, CME106, or MS&E220)				
Algorithmic Analysis (CS161)				
Computer Organ & Sys (CS107 or 107E)				
Principles of Computer Systems (CS110)				

**TOTAL UNITS USED TO SATISFY FOUNDATIONS REQUIREMENT** (May not exceed **10** units.)

**SIGNIFICANT IMPLEMENTATION REQUIREMENT**

At least one course in your MS program should be designated as satisfying the "Significant Implementation Requirement". Note that this course will also be used to satisfy some other requirement (i.e., Breadth, Depth, or Elective). This requirement ensures that you have taken part in some form of substantial software development as part of the MSCS program. Letter grade only.

Course Number:	Title:	Grade

*Courses that may be used to satisfy the significant implementation requirement include:* CS 140, 143, 144, 145, 148, 210B, 221, 227B, 243, 248, 341, and 346 (any deviations from this list must be approved by the Associate Chair for Education). Courses meeting the Significant Implementation Requirement must be taken at Stanford. Students who previously took at least two of these courses at Stanford as undergraduates may request a waiver of this requirement.

**BREADTH REQUIREMENT**

Choose three from list below:	(Breadth courses must be taken for at least three units.)	Grade	Units

**TOTAL UNITS USED TO SATISFY BREADTH REQUIREMENT** (*Letter grades only.*)

*Courses that may be used to satisfy the Software Theory breadth requirement include:* CS 124, 140, 147, 148, 149, 154, 155, 157, 205A, 221, 223A, 224N, 224S, 224U, 224W, 227B, 228, 229, 231A, 233, 240, 240E, 240H, 244B, 244E, 246, 249A, 262, 270, 273A, 274, 276, 279; CME 108, 302; EE 180, 282.

**UNITS FOR THE SOFTWARE THEORY SINGLE DEPTH SPECIALIZATION**

The courses you submit for your depth must meet the following requirements. Any deviations from the stated requirements must be noted and approved by your adviser in the Adviser Notes box provided (maximum of one adviser-approved deviation allowed). Courses taken for your Stanford undergraduate degree do not need to be repeated. Enter course selection in the table below:

<b>Adviser Notes</b>
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- a) CS 243
- b) At least one of: CS 244, 245, 341, 343, 345
- c) At least two of the following: CS 242, 255, 261, 263, 264, 265, 266, 267, 268, 355, 361B, 367
- d) A total of at least 27 units chosen from categories (a) through (c) or the following: CS 250, 251, 294S\*, 346, 362, 393\*, 395\*, 399\* (courses with \* notation require approval of MS adviser)

Course number	Title (Depth courses must be taken for at least 3 units.)	Grade	Units
<b>TOTAL SPECIALIZATION UNITS APPLIED TO MSCS (must total at least 27 units) Letter grades only.</b>			

**ELECTIVES**

List here any additional courses used to complete the 45-unit requirement for the MSCS degree. You may count up to a maximum of **three units** of 500-level CS seminars, CS300, EE380, EE385A, or other 1-2 unit seminars offered in the School of Engineering, as Electives toward the MS degree. Electives must be technical courses numbered above 100, related to the degree program, and approved by the adviser and MS program administrator. CS courses numbered above 110, excluding CS196 or CS198, are pre-approved as MS electives.

Course number	Title	Grade	Units
<b>TOTAL ELECTIVE UNITS APPLIED TO MSCS</b>			

**TOTAL UNITS APPLIED TO MSCS**

**ADDITIONAL REQUIREMENTS**

- All courses submitted for the MSCS degree must be numbered 100 or greater.
- At most 10 units of Foundations requirement courses may be counted toward your 45 units.
- At most 3 units of CS/EE/Engineering seminars may be counted toward your 45 units.
- At least 36 units submitted for the MSCS degree, including all courses taken for breadth and depth, must be taken for a letter grade.
- The average grade in the courses submitted for the MSCS must be at least a B (3.0 in Stanford's GPA scale).
- Units previously applied toward BS requirements may not also be counted toward the MSCS.
- You must complete at least 45 graduate units at Stanford before receiving the MSCS degree.

Adviser's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Department approval (Claire Stager): \_\_\_\_\_ Date: \_\_\_\_\_

FOR DEPARTMENT USE: UNITS \_\_\_\_\_ CR/NC \_\_\_\_\_ GPA \_\_\_\_\_