

DEPARTMENT OF COMPUTER SCIENCE

MSCS Program Sheet (2009-10)

Theoretical Computer Science Specialization

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

GENERAL INSTRUCTIONS

Before the end of your first quarter, you should complete the following steps. Detailed instructions are included in the **Guide to the MSCS Program Sheet** in your orientation packet (an online version is available at cs.stanford.edu/Degrees/mscs/programsheets/):

- Complete this program sheet by filling in the number, name and units of each course you intend to use for your degree.
- Attach a course schedule showing the year and quarter in which you intend to take each course in your program sheet.
- Meet with your adviser and secure the necessary signatures on the program sheet and any breadth course waiver forms.
- Submit the originals to the MS Program Administrator, Claire Stager, in Gates 182.

BREADTH 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 breadth 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.

Area A: Mathematical and theoretical foundations

Required:	Equivalent elsewhere (course number/title/institution)	Approval	Grade	Units
Probability (CS109, Stat116, CME106, or MS&E220)				
Automata and Complexity (CS154)				
Algorithmic Analysis (CS161)				

Choose one of:

Numerical Analysis (CME108 or CME302)				
Logic (CS156, CS157, CS258, or Phil 251)				
Mathematical Methods (CS205A)				

Area B: Computer systems

Required:	Equivalent elsewhere (course number/title/institution)	Approval	Grade	Units
Computer Architecture (EE108B or EE282)				

Choose two of:

Operating Systems (CS140)				
Compilers (CS143 or CS243)				
Computer Networks (CS144 or EE284)				

Area C: AI and applications

Choose two, including one at 200 level	Equivalent elsewhere (course number/title/institution)	Approval	Grade	Units
AI (CS121 or CS221)				
Databases (CS145 or CS245)				
Graphics (CS148 or CS248)				

TOTAL UNITS USED TO SATISFY BREADTH REQUIREMENT (AREAS A, B, AND C)

Note: This total may not exceed 21 units.

SEMINARS

You must take at least one 500-level CS seminar, or EE 380 or 385A. No more than three units of seminars or 1-2 unit courses may be counted towards the MS degree.

Course number	Title	Grade	Units

TOTAL SEMINAR UNITS APPLIED TO MSCS

DEPTH UNITS FOR THE THEORETICAL COMPUTER SCIENCE SPECIALIZATION

The courses you submit for your specialization must meet the following requirements:

- (a) _____ CS241 or CS258 or CS259 _____ CS261 (CS361A or CS361B may be used as substitutes for CS261)
- (b) At least five additional courses selected from the following. Courses with * notation require permission of faculty adviser:
 - _____ CS228 _____ CS262 _____ CS358 _____ CS364B
 - _____ CS241 _____ CS268 _____ CS359* _____ CS369*
 - _____ CS255 _____ CS345 _____ CS361A _____ CS374
 - _____ CS258 _____ CS355 _____ CS361B _____ Man Sci 310
 - _____ CS259 _____ CS357 _____ CS364A

Adviser Notes

Any deviations from the stated requirements must be noted and approved by your adviser in the Adviser Notes box provided. Enter course information for the courses you've selected in the table below. All specialization courses must be taken for a letter grade.

Course number	Title	Grade	Units
TOTAL SPECIALIZATION UNITS APPLIED TO MSCS (must total at least 21 units)			

ELECTIVES

List here any additional courses used to complete the 45-unit requirement for the MSCS degree.

Course number	Title	Grade	Units
TOTAL ELECTIVE UNITS APPLIED TO MSCS			

TOTAL UNITS APPLIED TO MSCS

ADDITIONAL REQUIREMENTS

- All courses submitted for the MSCS degree must be numbered 100 or greater.
- At most 21 units of introductory courses (CS100-110) or breadth requirements courses may be counted toward your 45 units.
- At least 36 units submitted for the MSCS degree, including all courses taken for your specialization, 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 _____