

# DEPARTMENT OF COMPUTER SCIENCE

## MSCS Program Sheet (2001-2002)

### 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):

- 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.
- Make copies of the completed program sheet and course schedule and return the originals to 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. 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
Statistics (Stat 116 or Man Sci & Eng 220)				
Automata and Complexity (CS154)				
Algorithmic Analysis (CS161)				

#### Choose one of:

Numerical analysis (CS137 or CS237A)				
Logic (CS157, CS257, CS258, or Phil 160A)				

#### Area B: Computer systems

Required:	Equivalent elsewhere (course number/title/institution)	Approval	Grade	Units
Computer Architecture (EE182 or EE282)				

#### Choose two of:

Operating Systems (CS140)				
Compilers (CS143)				
Computer Networks (CS244A 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)**

#### SEMINARS

You must take at least one 500-level seminar. 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) Each of the following courses:

- \_\_\_ CS256      \_\_\_ CS258      \_\_\_ CS261 (CS361A, CS361B or CS365 may be used as substitutes for CS261)

(b) At least twelve more units selected from the following. Courses with \* notation require permission of Prof. John Mitchell:

- \_\_\_ CS228      \_\_\_ CS353      \_\_\_ CS359\*      \_\_\_ CS367B  
 \_\_\_ CS255      \_\_\_ CS355      \_\_\_ CS361A      \_\_\_ CS368  
 \_\_\_ CS345      \_\_\_ CS356      \_\_\_ CS361B      \_\_\_ CS369\*  
 \_\_\_ CS351      \_\_\_ CS357      \_\_\_ CS365      \_\_\_ Man Sci 310  
 \_\_\_ CS352      \_\_\_ CS358      \_\_\_ CS367A

Adviser Notes

Any deviations from the stated requirements must be noted and approved by your adviser in the box provided. All specialization courses must be taken for a letter grade.

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

**ELECTIVES**

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

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 21 units of introductory courses (CS100-109) 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 \_\_\_\_\_