

**Stanford University • School of Engineering**  
**Computer Science**  
**Human-Computer Interaction Track**  
**2012-2013 Program Sheet**

*Final version of program sheet due to the department no later than one month prior to the last quarter of senior year.*

**\*Follow all requirements as stated for the year of the program sheet used.\***

Name: \_\_\_\_\_ SU ID: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
 Today's Date: \_\_\_\_\_ Month/Yr B.S. expected: \_\_\_\_\_

**Mathematics and Science Requirement** (*Delete courses and units not taken*)

Dept	Course	Title	Transfer/AP Approval by SoE			Unit	Grade
			✓ if Transfer	SoE Initials	Date		
<b>Mathematics (26 units minimum)</b>							
MATH	41	Calculus (see note 1)				5	
MATH	42	Calculus				5	
CS	103	Mathematical Foundations of Computing (see note 2)				5	
CS	109	Introduction to Probability for Computer Scientists (see note 3)				5	
<i>Plus two electives (see note 4)</i>							
<i>Mathematics Unit Total (26 units minimum)</i>							
<b>Science 11 units minimum</b>							
PHYS	41	Mechanics (or PHYS 21 or 61)				4	
PHYS	43	Electricity and Magnetism (or PHYS 23 or 63)				4	
		Elective (see note 5)					
<i>Science Unit Total (11 units minimum)</i>							
<i>(37 units min. Math/Sci combined)</i>							
<b>Technology in Society Requirement</b> ( <i>1 course required; see UGHB Figure 3-3 for approved list; see note 11</i> )							
<b>Engineering Fundamentals (13 units minimum)</b>							
CS	106	Programming Abstractions (B or X)				5	
ENGR	40	Introductory Electronics (40N also allowed)				5	
		Elective (see note 6; CS 106A, B, and X not allowed)					
<i>Engineering Fundamentals Total (13 units minimum)</i>							

**NOTES**

- \* All courses listed on this form must be taken for a letter grade (if offered) and can be included under only one category.
  - \* This printed form must be signed by the departmental representative. Changes must be petitioned (see UGHB pg 27-29) and initialed in ink.
  - \* Minimum Grade Point Average (GPA) for all courses in Engineering Funds and CS Core, Depth, and Senior Project (combined) is 2.0
  - \* Transfer and AP credits in Math, Science, Fundamentals, & TIS must be approved by the SoE Dean's Office. Transfer credits in Computer Science Core, Depth and Senior Project must be approved by the Computer Science undergraduate program office.
- (1) Math 19, 20 and 21 may be taken instead of Math 41 and 42 as long as at least 26 math units are taken.
  - (2) Students who took CS 103X are required to complete one additional unit in depth (i.e., 26 units minimum for track and elective courses).
  - (3) Students who complete STATS 116, MS&E 120, or CME 106 in *Winter 2008-09 or earlier* may count that course as satisfying the CS 109 requirement. These same courses taken in *Spring 2008-09 or later* cannot be used to satisfy the CS 109 requirement.
  - (4) The Mathematics electives list consists of: Math 51, 104, 108, 109, 110, 113; CS 157, 205A; Phil 151; CME 100, 102, 104. Completion of Math 52 & 53 will (together) count as one Math elective. Restrictions: CS 157 + Phil 151 may not be used in combination to satisfy the Math electives requirement. Students who have taken both Math 51 and 52 may not count CME 100 as an elective.
  - (5) Any course of 3 or more units from the SoE Science List (Fig. 3-2 in the UGHB), PSYCH 30 or 55, or AP Chemistry may be used.
  - (6) One course required; may not be CS 106A, B or X. See Engineering Fundamentals Chap 3, Fig. 3-4 in the UGHB for approved list.

*program sheet continued on page 2*

## CS HCI Track Program Sheet (continued)

### Human-Computer Interaction Track Core, Depth and Senior Project (43 units minimum)

*Be advised: no course may be listed twice on the sheet. No double-counting.*

Dept	Course	Title	Transfer/Deviation Approval by Dep			Unit	Grade
			✓ if Transfer	Dept Initials	Date		
<b>Core (15 units minimum)</b>							
CS	107	Computer Organization and Systems				5	
CS	110	Principles of Computer Systems (see note 7)				5	
CS	161	Design and Analysis of Algorithms (see note 8)				5	
<b>Depth; Track and Electives (25 units and seven courses minimum) see note 9</b>							
CS	147	Introduction to HCI Design				4	
CS		One of: CS247, 377, 448B, 210A				4	
CS		Human: One of PSYCH 55, 70, 252; ME 101, 116, or any MS&E 18*					
CS		Computer: One of CS 108, 124, 140, 142, 221, 229, 229A, 249A					
		Interaction: One of CS 148, 376, 378, 447					
		Two additional courses from the lists above, general CS electives (see note 10), and ARTSTUD 60; COMM 169; CS476A; ME 115A, 115B					
		Optional Elective					
<b>Senior Project (1 course required)</b>							
CS		At least 3 units of 191, 191W, 194, 194W, 210B, 294 or 294W (see note 11)				3	
<i>Computer Science Core, Depth and Senior Project Total (43 units minimum)</i>							

### Program Approvals

#### Departmental

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

#### School of Engineering (signature not required prior to graduation)

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

### NOTES (continued from page 1)

- (7) Students who complete CS108 and either CS 140 or CS 143 by Winter Quarter 2008-09 or earlier may choose to count CS 108 as satisfying the CS 110 requirement. In such a case, CS 108 may not also be counted as an elective and the student will be required to complete one additional unit in their depth courses (i.e., 26 units minimum for track and elective courses).
- (8) Students who took CS161 for 4 units are required to complete one add'l unit in depth courses (i.e., 26 units min for track and elective courses).
- (9) Some HCI and Design project courses are limited enrollment and require students to submit applications. Students should be careful not to create a degree plan which only works if they get into a limited-enrollment course.
- (10) General CS Electives: CS 108, 121 or 221\*, 124, 140, 142, 143, 144, 145, 148, 149, 154, 155, 156, 157 or (PHIL 151), 164, 205A, 205B, 210A, 222, 223A, 224M, 224N, 224S, 224U, 224W, 225A, 225B, 226, 227, 227B, 228, 228T, 229, 229A, 229T, 231A, 235, 240, 240H, 241, 242, 243, 244, 244B, 245, 246, 248, 249A, 249B, 254, 255, 258, 261, 262, 263, 270, 271, 272, 173 or 273A, 274, 276, 277, 295; CME 108; EE 108B, 282. \*(Students may not count both CS 121 and 221 toward their major requirements.)
- (11) The WIM requirement may be met by taking CS 181W as a Technology in Society course or through the Senior Project course (191W, 194W, 210B or 294W only).