Stanford University ♦ School of Engineering

Computer Science

Human-Computer Interaction Track

2015-2016 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: ✓ if Transfer	SoE Initials	Date	Unit	Grade
Mathematics (26 units minimum)							
MATH	41	Calculus (see note 1)				5	
MATH	42	Calculus				5	
CS	103	Mathematical Foundations of Computing				5	
CS	109	Introduction to Probability for Computer Scientists				5	
Plus two electives (see note 2)							
					Mathematics Unit Total (26 units minimum)		
Science 11 units minimum)							
PHYS	41	Mechanics (or PHYS 21 or 61)				4	
PHYS	43	Electricity and Magnetism (or PHYS 23 or 63)				4	
		Elective (see note 3)					
					Science Unit Total (11 units minimum)		
					(37 units min. Math/Sci combined)		
Technology in Society Requirement *(1 course required; see UGHB Figure 3-3 for approved list; see note 8)*							
Engineering Fundamentals *(13 units minimum)*							
CS	106	Programming Abstractions (B or X)				5	
ENGR	40	Introductory Electronics (40A and 40M also allowed; see note 4)				5	
		Elective (See Fig. 3-4 in the UGHB for approved list; CS 106A, B or X not allowed)					
					Engineering Fundamentals Total (13 units minimum)		

NOTES

* **All courses listed on this form must be taken for a letter grade (if offered) and can be included under only one catagory.**

* 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.

* Courses must be taken for the number of units on the Program Sheet. CS103, 106B/X, 107, 109, 110, and 161 must be taken for 5 units.

(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) 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.

(3) 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.

(4) Students who take ENGR 40A or 40M for fewer than 5 units are required to take 1-2 additional units of ENGR Fundamentals (13 units minimum), or 1-2 additional units of Depth (27 units minimum for track and elective courses).

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 Dept			Unit	Grade
			✓ if Transfer	Dept Initials	Date		
Core (15 units minimum)							
CS	107or107E	Computer Organization and Systems				5	
CS	110	Principles of Computer Systems				5	
CS	161	Design and Analysis of Algorithms				5	
Depth; Track and Electives (25 units and seven courses minimum) *see note 5*							
CS	147	Introduction to HCI Design (Track Requirement A)				4	
CS	247	HCI Design Studio (Track Requirement A)				4	
		HCI in CS (Track Requirement B, see note 6)					
		HCI in CS (Track Requirement B, see note 6)					
		HCI in CS (Track Requirement B, see note 6)					
		Interdisciplinary HCI (Track Requirement C, see note 7)					
		Interdisciplinary HCI (Track Requirement C, see note 7)					
		Optional Elective					
Senior Project (1 course required)							
CS		At least 3 units of 191, 191W, 194, 194H, 194W, 210B, 294 or 294W *(see note 9)*				3	
		Computer Science Core, Depth and Senior Project Total (43 units minimum)					

Example HCI depth course plans

Front-end dev.: CS 147, 247, 142, 448B, 194H, 148, 221; **Design thinking:** CS 147, 247, 448B, 142, 194H, ME 101, 115A;
Product management: CS 147, 247, 194H, 210A, 142, COMM 169, 140; **User experience:** CS 147, 247, 194H, 210A, 376, COMM 121, MS&E 125;
Research frontiers: CS 147, 247, 376, 448B, ME 216M, COMM 124, 166, PSYCH 252 **Digital art:** CS 147, 247, 148, 448B, 142, ARTSTUDI 160, 168;

Program Approvals

Departmental

Printed Name: _____ Date: _____

Signature: _____

School of Engineering (No action required-office use only)

Printed Name: _____ Date: _____

Signature: _____

NOTES (continued from page 1)

(5) Some HCI project courses are limited enrollment. Be careful not to create a degree plan that depends on a limited-enrollment course.

(6) Track Requirement B: Any three of CS 142, 148, 194H, 210A, 376, any 377A/B/C/... 'Topics in HCI' of three or more units, 448B; ME 216M

(7) Track Requirement C: At least two additional courses selected from the Track Requirement B list, the General CS Electives list (see note 8), or the following: any d.school class of three or more units, any class of three or more units at hci.stanford.edu under the 'courses' link; Communication (COMM 121, 124/224, 140/240, 166, 169/269, 172/272, 182, 324); Art Studio (ARTSTUDI 160, 162, 163, 164, 165, 168, 264, 266, 267); Sym Sys (SYMSYS 245); Psychology (30, 45, 55, 70, 75, 110, 131, 154); Empirical Methods (MS&E 125, PSYCH 252, 254, 110, STATS 203, EDUC 191X, HUMBIO 82A); ME design (ME 101, 115A, 203, 210, 216A); Learning Design+Tech (Educ 281X, 239X, 338X, 342); MS&E (MS&E 185, 331); Computer music (Music 220A/B/C, 250A)

(8) General CS Electives: CS 108, 121 or 221*, 124, 131, 140, 142, 143, 144, 145, 148, 149, 154, 155, 157 or (PHIL 151), 164, 166, 167, 168, 190, 205A, 205B, 210A, 223A, 224M, 224N, 224S, 224U, 224W, 225A, 225B, 227B, 228, 228T, 229, 229A, 229T, 231A, 231B, 231M, 231N, 232, 233, 240, 240H, 242, 243, 244, 244B, 245, 246, 248, 249A, 249B, 251, 254, 255, 261, 262, 263, 264, 265, 266, 267, 270, 271, 272, 173 or 273A, 274, 276, 277, 279, 348B; CME 108; EE180, 282, 364A. *(Students may not count both CS 121 & 221 toward their major reqts.)

(9) WIM requirement: take CS 181W as a Technology in Society course or take the Senior Project course (191W, 194W, 210B or 294W only).