Stanford University ♦ School of Engineering

Computer Science

Human-Computer Interaction Track

2018-2019 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 BS 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		Calculus (see note 1)					
CS	103	Mathematical Foundations of Computing					
CS	109	Introduction to Probability for Computer Scientists					
Plus two electives (see note 2)							
					Mathematics Unit Total (26 units minimum)		
Science (11 units minimum)							
PHYS	41 or 41E	Mechanics (or PHYS 21 or 61)					
PHYS	43	Electricity and Magnetism (or PHYS 23 or 63)					
		Elective (see note 3)					
					Science Unit Total (11 units minimum)		
					(37 units min. Math/Sci combined)		

Technology in Society Requirement *(1 course req'd; must be on Approved list in UGHB Fig. 4-3 the year taken; see note 10)*

Engineering Fundamentals *(13 units minimum)*

CS	106	Programming Abstractions (B or X)					
ENGR	40M or 40A	Introductory Electronics (ENGR 40 also allowed; see note 4)					
		Elective: May be an ENGR Fundamentals or an add'l CS Depth course (see note 5)					
					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 in only one category.**

* This printed form must be signed by the department representative. Changes must be petitioned (see ughb.stanford.edu/petitions) and initialed in ink.

* Minimum Grade Point Average (GPA) for all courses in ENGR Fundamentals 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, & Senior Project must be approved by the CS undergraduate program office.

* Courses must be taken for the higher number of units offered. CS 103, 106B/X, 107, 109, 110, and 161 must be taken for 5 units.

(1) Math 19/20/21 or Math 41/42 or AP credit may be used, as long as at least 26 math units are taken. AP Calculus must be approved by SoE.

(2) Math electives: Math 51, 52, 53, 104, 108, 109, 110, 113; CS 157, 205L; PHIL 151; CME 100, 102, 103 (or EE 103), 104.
Restrictions: CS 157 + Phil 151 may not be used in combination to satisfy the Math electives requirement.
Students who have taken both Math 51 & 52 may not count CME 100 as an elective.

(3) Any course of 3 or more units from the SoE Science List (Fig. 4-2 in the UGHB), PSYCH 30, 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 (26-27 units minimum for track and elective courses).

(5) See Fig. 4-4 in the UGHB for approved ENGR Fundamentals list. May not be any CS 106.

CS Human-Computer Interaction Track Program Sheet (continued)

CS HCI 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	107 or 107E	Computer Organization and Systems					
CS	110	Principles of Computer Systems					
CS	161	Design and Analysis of Algorithms					
Depth; Track and Electives (25 units and seven courses minimum) *see note 6*							
CS	147	Introduction to HCI Design (Track Requirement A)					
CS	247	HCI Design Studio (Track Requirement A)					
		HCI in CS (Track Requirement B, see note 7)					
		HCI in CS (Track Requirement B, see note 7)					
		HCI in CS (Track Requirement B, see note 7)					
		Interdisciplinary HCI (Track Requirement C, see note 8)					
		Interdisciplinary HCI (Track Requirement C, see note 8)					
		Optional Elective					
Senior Project (1 course required)							
CS		At least 3 units of 191, 191W, 194, 194H, 194W, 210B, 294 or 294W *(see note 10)*					
		Computer Science Core, Depth, and Senior Project Total (43 units minimum)					

Example HCI depth course plans

Design thinking: CS 147, 247, 448B, 142, 194H; ME 101, 115A

Digital art: CS 142, 147, 247, 148, 448B; ARTSTUDI 160, 168

Front-end dev.: CS 147, 148, 247, 142, 448B, 194H, 221

Product management: CS 142, 147, 247, 194H, 210A; 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

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)

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

(7) Track Requirement B: Any three of CS 142, 146, 148, 194H, 206, 210A, 278, 376, any 377A/B/C/...'Topics in HCI' of three or more units, 448B; ME 216M

(8) Track Requirement C: At least two additional courses selected from the Track Requirement B list, the General CS Electives list (see note 9), 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, 154/254, 166, 169/269, 172/272, 182, 324); Learning Design +Tech (Educ 236, 281, 239, 338, 342); Art Studio (ARTSTUDI 160, 162, 163, 164, 165, 168, 264, 266, 267); Psychology (PSYCH 30, 35, 45, 50, 60, 70, 75, 80, 90, 95, 131, 154); Symbolic Systems (SYMSYS 245); Empirical Methods (COMM 314; MS&E 125; PSYCH 251, 252, 253; STATS 203; EDUC 191; HUMBIO 82A); ME design (ME 101, 115A, 203, 210, 216A); MS&E (MS&E 185, 331); Computer music (Music 220A/B/C, 250A, 256A)

(9) General CS Electives: CS 108, 124, 131, 140 or 140E, 141, 142, 143, 144, 145, 148, 149, 151, 154, 155, 157 or (PHIL 151), 166, 168, 190, 195 (4 units maximum), 205B, 205L, 210A, 217, 221, 223A, 224N, 224S, 224U, 224W, 225A, 227B, 228, 229, 229T, 230, 231A, 231B, 231M, 231N, 232, 233, 234, 236, 238, 240, 242, 243, 244, 244B, 245, 246, 248, 251, 252, 254, 255, 261, 262, 263, 264, 265, 266, 267, 269I, 270, 272, 273A, 273B, 274, 276, 279, 348B, 348C, 348K, 352, 369L; CME 108; EE180, 282, 364A

(10) WIM requirement: may be met by taking CS 181W as a Technology in Society course or the Senior Project course (191W, 194W, 210B, or 294W only).