Stanford University ♦ School of Engineering

Computer Science

Individually Designed Track

2020-2021 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	19	Calculus (see note 1)					
MATH	20						
MATH	21						
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 TiS list at* ughb.stanford.edu *the year taken; see*

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 additional CS Depth course (see note 5)					
					Engineering Fundamentals Total (13 units minimum)		

NOTES

- **All courses listed on this form can be included under only one category. There is no double-counting.**
- **All courses listed on this form must be taken for a letter grade except courses taken Spring 2019-20, and Autumn 2020-21 through Summer 2020-2**
- 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 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 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) 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, 107, 108, 109, 110, 113; CS 157, 205L; PHIL 151; CME 100, 102, 104; ENGR 108 (or CME 103 or EE
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 (see Approved Courses list at ughb.stanford.edu), PSYCH 30, or AP Chemistry may

(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 minimu or 1-2 additional units of Depth (26-27 units minimum for track and elective courses).

(5) See ENGR Fundamentals Approved Courses list at ughb.stanford.edu. May not be any CS 106.

CS Individually Designed Track Program Sheet (continued)

CS Individually Designed 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 or 111	Principles of Computer Systems					
CS	161	Design and Analysis of Algorithms					
Depth; Track and Electives (25 units and seven courses minimum) *see note 6*							
Senior Project (1 course required)							
CS		At least 3 units of 191, 191W, 194, 194H, 194W, 210B, 294 or 294W *(see note 7)*					
		Computer Science Core, Depth and Senior Project Total (43 units minimum)					

Program Approvals

Undergraduate Advisor

Printed Name: _____ Date: _____

Signature: _____

Department

Printed Name: _____

Signature: _____ Date: _____

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

Printed Name: _____ Date: _____

Signature: _____

NOTES (continued from page 1)

(6) Students may propose an Individually Designed Track. Proposals should include a minimum of seven courses, at least four of which must be CS courses numbered 100 or above. Proposals must be submitted & approved at least two quarters before graduation. To create a individually designed program, students should complete an *Individually Designed Track* program sheet and seek approval from th undergrad advisor and from the Associate Chair for Education, Prof. Mehran Sahami. Proposals will be evaluated for coherence and rigor. Approved program sheets should be given to the staff in the CS undergraduate program office. Any subsequent changes must go through th same proposal and approval process.

(7) The WIM requirement may be met by taking CS 181W or 182W as a Technology in Society course or through the Senior Project course (191W, 194W, 210B, or 294W only).