

**Stanford University ♦ School of Engineering**  
**Computer Science**  
**2007-2008 Program Sheet**

*Final version of completed and signed 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: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Date: \_\_\_\_\_

SU ID: \_\_\_\_\_  
 Local Phone: \_\_\_\_\_  
 Date B.S. expected: \_\_\_\_\_

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

Dept	Course	Title	Transfer/AP Approval			Unit	Grade
			✓ if Transfer	Initials	Date		
<b>Mathematics (23 units minimum)</b>							
MATH	41	Calculus (see note 1)				5	
MATH	42	Calculus				5	
STAT116 or MS&E 120 or CME 106		Probability				3 to 5	
CS 103X or CS 103A & B		Discrete Structures				4 or 6	
<i>Plus two electives (see note 2)</i>							
<i>Mathematics Unit Total (23 units minimum)</i>							
<b>Science (11 units minimum)</b>							
PHYSICS	41	Mechanics				4	
PHYSICS	43	Electricity and Magnetism				4	
		Elective (see note 3)					
<i>Science Unit Total (11 units minimum)</i>							
<i>(34 units min. Math/Sci combined)</i>							
<b>Technology in Society Requirement (1 course required; see UGHB Figure 3-3 for approved list; see note 7)</b>							
<b>Engineering Fundamentals (13 units required)</b>							
CS	106	Programming Methodology and Abstractions (B or X)				5	
ENGR	40	Introductory Electronics				5	
		Elective (see note 4)				3 to 5	
<i>Engineering Fundamentals Total (13 units minimum)</i>							

**NOTES**

- \* This form is available as an Excel file at <<http://ughb.stanford.edu/>>. The printed form must be signed by the departmental representative. Changes must be initialed in ink.
  - \* All courses listed on this form must be taken for a letter grade if offered by the instructor.
  - \* Minimum Grade Point Average (GPA) for all courses in Engineering Fundamentals and Computer Science Depth (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 Depth must be approved by the Computer Science undergraduate program office.
  - \* All courses listed on this form may only be included under one category. Delete courses not taken.
- (1) Math 19, 20 and 21 may be taken instead of Math 41 and 42 as long as at least 23 math units are taken.
  - (2) The Mathematics electives list consists of: Math 51, 103, 108, 109, 110, 113; CS 156, 157, 205A; Phil 151; CME 100, 102, 104. Completion of Math 52 and 53 will (together) count as one Math elective. Restrictions: Math 51 and Math 103, or Math 51 and CME 100, or Math 103 and Math 113, or CS 157 and Phil 151, may not be used in combination to satisfy the Math electives requirement.
  - (3) The Science elective may be any course of 3 or more units from the SoE Science List plus Psych 30 or 55. AP Chem also meets this requirement. Either of the physics sequences 61/63 or 21/23 may be substituted for 41/43 as long as at least 11 science units are taken.
  - (4) One course required; may not be CS 106A, B or X. See Engineering Fundamentals Fig. 3-4 in the UGHB for approved list.

*program sheet continues on page 2*

## Computer Science Program Sheet (continued)

**Computer Science Depth (43 units minimum)** *Be advised, no course may be listed twice on the sheet. No double-counting.*

Dept	Course	Title	Transfer/AP Approval			Unit	Grade
			✓ if Transfer	Initials	Date		
<i>Programming (2 courses required)</i>							
CS	107	Programming Paradigms				5	
CS	108	Object-Oriented Systems Design				4	
<i>Theory (2 courses required)</i>							
CS	154	Automata and Complexity Theory				4	
CS	161	Design and Analysis of Algorithms				4	
<i>Systems (3 courses required; see note 5)</i>							
EE	108B	Digital Systems II				3 or 4	
<i>Applications (2 courses required; see note 6)</i>							
CS		Artificial Intelligence (CS 121 or 221)				3 or 4	
<i>Project (1 course required)</i>							
CS		At least 3 units of 191, 191W, 194, 294 or 294W (see note 7)					
<i>Restricted Electives (2 or 3 courses; see note 8)</i>							
<i>Computer Science Depth Total (43 units minimum)</i>							

### Program Approvals

#### Departmental

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

Date: \_\_\_\_\_

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

#### School of Engineering

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

Date: \_\_\_\_\_

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

### NOTES (continued from page 1)

- (5) The two systems electives must be chosen from the following set: CS140, 143, 155, 240D, 242 and 244A. The systems electives must include a course with a large software project, currently satisfied by either CS140 or 143.
- (6) The applications elective must be chosen from the following set: CS145, 147, 148, 223A, 223B, 248 or 262.
- (7) The WIM requirement for Freshmen and Transfer students entering Fall 96 or later may be met by taking CS 201 as a Technology in Society course or through the Senior Project course (191W, 194, or 294W only). CS191 and 191W projects require faculty sponsorship and must be pre-approved. See department representative in Gates room 182.
- (8) Students who take CS103A/B must complete two electives; students who opt for CS103X must complete three. The list of approved electives is reviewed annually by the Undergraduate Program Committee. Electives must be at least 3 units each. The current list consists of CS 140, 143, 144 or 244A, 145, 147, 148 or 248, 155, 156, 157, 205A, 205B, 222, 223A, 223B, 224M, 224N, 224S, 225A, 225B, 226, 227, 228, 229, 240, 242, 243, 244B, 245, 247, 249A, 249B, 255, 256, 257, 258, 261, 262, 270, 271, 272, 273A, 274, 276, 277, 295, CME 108, EE282.