

# STANFORD UNIVERSITY SCHOOL OF ENGINEERING

2003-04

## Computer Science

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

Local Phone: \_\_\_\_\_

Local Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

ID #: \_\_\_\_\_

Date B.S. expected: \_\_\_\_\_

Dept	No	Title	Total Units	Grade	√ if Trans-fer	Transfer Credit	
						Course #/School	Approval Date Initial

*Mathematics (23 units minimum required)*

MATH	41	Calculus (see note 1)	5					
MATH	42	Calculus	5					
STAT	116	Probability (or ManSci/Eng 120)	3 to 5					
CS	103	Discrete Structures (X, or A and B)	4 or 6					

*Plus any two of the following courses:*

MATH	51	Calculus	5					
MATH	103/113	Linear Algebra (see note 2)	3					
MATH	109	Applied Group Theory	3					
CS	157	Logic (or Phil 160A)	4					
CS	205	Mathematics for Robotics and Vision	3					

*Mathematics Total*   *(23 units minimum)*

*Science (11 units minimum required)*

PHYSICS	53	Mechanics	4					
PHYSICS	55	Electricity and Magnetism	4					
		Elective (see note 3)						

*Science Total*   *(11 units minimum)*

*Engineering Fundamentals (13 units minimum required)*

CS	106	Programming Abstract (A and B, or X)	5					
ENGR	40	Introductory Electronics	5					
		Elective (see note 4)						

*Fundamentals Total*   *(13 units minimum)*

*Technology in Society (1 course required, 3-5 units, see list earlier in Handbook)*

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*Totals This Page*  

**NOTES:**

- (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) Completion of Math 52 and 53 satisfies the Math 103/113 requirement.
- (3) The Science elective may be any course of 3 or more units from the School of Engineering Science List plus Psych 30 or 40. AP Biology or Chemistry also meet this requirement. Either of the physics sequences 61/63 or 21/23 may be substituted for 53/55 as long as at least 11 science units are taken.
- (4) One course required, 3 to 5 units. See Engineering Fundamentals list earlier in Handbook.
- (5) The two systems electives must be chosen from the following set: CS140, 143, 155, 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 or 248.
- (7) 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. The current list consists of CS 110, 137, 140, 143, 145, 147, 148 or 248, 155, 157, 205, 206, 222, 223A, 223B, 224M, 224N, 225A, 225B, 226, 227, 228, 229, 240, 241, 242, 243, 244A, 245, 246, 247A, 247B, 249, 255, 256, 257, 258, 261, 262, 270, 271, 272, 274, 276 and EE282.

## Computer Science

Dept	No	Title	Total Units	Grade	√ if Transfer	Transfer Credit	
						Course #/School	Approval
							Date

### Computer Science Depth (43 units minimum required)

#### *Programming (2 courses)*

CS	107	Programming Paradigms	5					
CS	108	Object-Oriented Systems Design	4					

#### *Theory (2 courses)*

CS	154	Automata and Complexity Theory	4					
CS	161	Design and Analysis of Algorithms	4					

#### *Systems (3 courses-see note 5 on the previous page)*

EE	108B	Digital Systems II	4					

#### *Applications (2 courses-see note 6 on the previous page)*

CS		Artificial Intelligence (CS 121 or 221)	3 to 4					

#### *Project (1 course)*

CS		At least 3 units of 191, 191W or 194						
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#### *Restricted Electives (2-3 courses; see note 7 on the previous page)*


<i>Totals from this page</i>	
<i>Totals from previous page</i>	
<i>Program totals</i>	

#### Departmental Approval

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

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

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

#### School of Engineering Approval

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

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

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

#### **GENERAL NOTES**

- CS 191W, 194 or 201 will fulfill the "Writing in the Major" requirement for students entering Fall 1996 or later.
- This form is available as an Excel file at [ughb.stanford.edu](http://ughb.stanford.edu). The printed form must be signed by the department representative. Changes must be initialed in ink.
- Transfer credits in Math, Science, Fundamentals, and TIS must be approved by the Senior Associate Dean for Student Affairs in Terman 201. Transfer credits in Computer Science Depth must be approved by the department representative.
- Courses may be listed under only one category.
- 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.