

Computer Science Major Elective Approval Form

Student's Name: Last, First , Middle

Student's Email

Student's Phone Number

I consider the following courses appropriate electives to supplement my Computer Science major:

Course Department	Course Number	Course Name	# of Units

Student's Signature

Date

I have seen this student's program and believe that the courses listed represented an appropriate selection of electives.

Advisor's Signature

Date

UPPER DIVISION ELECTIVES

9/1/2004

Upper-division Computer Science majors must choose a series of upper-division major elective courses to have an emphasis on a subject or subjects in their major studies. You may change your selection at any time by submitting a new Major Elective Approval form to the Computer Science Department.

B.S. students must take 20 units of electives and B.A. must take 11 units of electives from the courses listed here. At least 8 units of these electives must be Computer Science courses. The required courses in the upper division major generally do not count towards these electives. All upper division elective courses must be taken for a letter grade.

Communication Networks	
CMPSC 176A	Introduction to Computer Communication Networks
CMPSC 176B	Network Computing
CMPSC 176C	Advanced Topics in Internet Computing
Software Systems	
CMPSC 160	Translation of Programming Languages (Elective for BA, required for BS)
CMPSC 171	Distributed Systems
CMPSC 172	Software Engineering
CMPSC 174A	Fundamentals of Database Systems
CMPSC 174B	Design and Implementation Techniques of Database Systems
CMPSC 180	Computer Graphics
Computer Security	
CMPSC 177	Computer Security
CMPSC 178	Introduction to Cryptography
Theory and Logic	
CMPSC 186	Theory of Computation
MATH/CMPSC 109A/B/C	Introduction to Mathematical Logic
Computer Graphics and Artificial Intelligence	
CMPSC 165A	Artificial Intelligence
CMPSC 165B	Machine Learning
CMPSC 180	Computer Graphics
CMPSC/ECE 181B	Introduction to Computer Vision
CMPSC 182	Multimedia Computing
Undergraduate Projects, Special Topics, and Research	
CMPSC 189AB	Senior Computer Systems Project
CMPSC 190AA-ZZ	Special Topics in Computer Science
CMPSC 192	Projects in Computer Science (Only available to students with GPA = 3.0, at most 4 units may be counted as upper division electives)
CMPSC 196	Undergraduate Research (Only available to students with GPA = 3.0, at most 4 units may be counted as upper division electives)
Hardware	
ECE 152B	Digital Design Methodologies
CMPSC/ECE 153A	Hardware/Software Interface
ECE 153B	Sensor and Peripheral Interface Design
Signal Processing	
ECE 130A/B/C	Signal Analysis and Processing
Scientific Computing	
CMPSC 110A/B	Foundation of Scientific Computing (You must take either of these courses to satisfy your upper division major requirements, so to receive 4 units of credit toward your electives, you must take both courses.)
MATH 108A/B	Linear Algebra
MATH 119A/B	ODEs
MATH 124A/B	PDEs, Fourier Series and Numerical Methods
PSTAT and Mathematics	
MATH 132A/B	Introduction to Operations Research
PSTAT 122/130/132C	Probability and Statistics