

Computer Science, B.S.

Department of Mathematics & Computer Science, 303-556-3208, Science Building 1022

College of Letters, Arts, & Sciences

Catalog 14-15

This sheet applies to the 2014-15 catalog *only*. It does not replace the full catalog or departmental advising sheets as official statements of requirements. Students with declared majors *must* work with a faculty advisor on course selection and sequencing to ensure a timely graduation.

General Studies	36-38	
Major courses	50	
Required Math minor	21-23	
Required ancillary courses	10	
Electives	0-3	
Total to graduate (min. 40 hrs. upper-division)	121-123 min.	

Students who have reached junior standing (60 hrs) should request a CAPP (graduation compliance report) and review it with a faculty advisor.

*TO BE COMPLETED WITHIN FIRST 30 COLLEGE-LEVEL CREDIT HOURS

Written Communication

- ENG 1010 (3 hrs) Composing Arguments*
or ENG 1008/1009 (6 hrs.) Intro to Composition, Parts 1 & 2*
 ENG 1020 (3 hrs) Freshman Comp: Analysis, Research, & Documt.
(ENG 1020 must be completed within 45 credit hours)

Oral Communication*

- SPE 1010 (3 hrs)

Quantitative Literacy*

- MTH 1110 (4 hrs.) College Algebra or higher level math
*NOTE: MTH 1110 & MTH 1120 OR MTH 1400 are prereqs for MTH 1410 do **not** take MTH 1112 College Algebra through Modeling*

Arts and Humanities

- (3 hrs.)
 PHI 3370 (3hrs.) Computers, Ethics, and Society

Historical

- (3 hrs.)

Natural and Physical Sciences (labs required, see CS major advisor†)

- BIO 1080 (4hrs.) General Biology I & BIO 1090-1 Lab
or BIO 1081 (4hrs.) General Biology II & BIO 1091-1 Lab
or CHE 1800 (4hrs.) General Chemistry I
and CHE 1810 (4hrs.) General Chemistry II & CHE 1850-2 LAB
or PHY 2311 (4hrs.) General Physics I & PHY2321-2 Lab
or PHY 2331 (4hrs.) General Physics II & PHY2341-2 Lab

Social and Behavioral Sciences I

- (3 hrs.)

Social and Behavioral Sciences II

- (3 hrs.)

Global Diversity

- (3 hrs.) should be satisfied within General Studies

MAJOR COURSES (Please see a Faculty Advisor in M&CS dept)

NOTE: All CS and MTH courses must be completed with a "C" or higher.

- CS 1050 (4 hrs.) Computer Science 1 (This course is part of MTH minor)
 CS 1400 (4 hrs.) Computer Organization 1
 CS 2050 (4hrs.) Computer Science 2
 CS 2400 (4hrs.) Computer Organization 2
 CS 3210 (4hrs.) Principles of Programming Languages
 CS 3240 (2hrs.) Intro. to the Theory of Computation
 CS 3600 (4hrs.) Operating Systems
 CS 4050 (4hrs.) Algorithms & Algorithm Analysis
 CS 4250 (4hrs.) Software Engineering Principles
 CS 4260 (4hrs.) Software Engineering Practices (Senior Experience)

Computer Science Electives – A minimum of 16 additional credit hours selected from upper division CS courses or/and MTH4480-6 in consultation with a faculty advisor:

- CS 16 hours or CS 12 hours and MTH 4480-4 Numerical Analysis I

Required Ancillary Courses

- COM 2610 (3hrs.) Introduction to Technical Writing

MATH MINOR COURSES† (see department for substitutions)

- MTH 1410 (4hrs.) Calculus I
 MTH 2140 (2hrs.) Computational Matrix Algebra
 MTH 2410 (4hrs.) Calculus II
 MTH 3170 (4hrs.) Discrete Mathematics for Computer Science
 MTH 3210 (4hrs.) Probability & Statistics (Calculus-based)

†The total credits of departmentally approved science and mathematics courses must be at least 30 credits.. Discuss with your CS faculty advisor in M&CS dept.

NOTE: As an alternative to the B.S. degree program, the CS faculty work with the Center for Individualized Learning to provide students with programs customized to their educational needs. (Clear Creek—2nd Floor)

Multicultural Requirement

should be satisfied within General Studies

ELECTIVES