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.

<table>
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<tr>
<th>General Studies</th>
<th>36-38</th>
<th>Students who have reached junior standing (60 hrs) should request a CAPP (graduation compliance report) and review it with a faculty advisor.</th>
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<tr>
<td>Major courses</td>
<td>50</td>
<td></td>
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<td>Required Math minor</td>
<td>21-23</td>
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<tr>
<td>Required ancillary courses</td>
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<tr>
<td>Electives</td>
<td>0-3</td>
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<td>Total to graduate (min. 40 hrs. upper-division)</td>
<td>121-123 min.</td>
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*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 3120 (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**