

**Computer Science, B.S.**  
**303-556-3208 Science Building 1022**  
**School of Letters, Arts, & Sciences**

Catalog 13-14

This sheet applies to the 2013-14 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	
<b>Total to graduate (min. 40 hrs. upper-division)</b>	<b>121-123 min.</b>	

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-CREDIT HOURS AT MSU-Denver**

Written Communication

- \_\_\_ ENG 1010 (3 hrs.) Composing Arguments\*
- or** ENG 1008/1009 (6 hrs.) Composing Arguments, Parts I & II\*
- \_\_\_ ENG 1020 (3 hrs.) Freshman English: Rsrch, Anly, & Documt.  
(to be completed within 60 credits at Metro)

Oral Communication\*

- \_\_\_ SPE 1010 (3 hrs.) Public Speaking

Quantitative Literacy\*

- \_\_\_ MTH 1110 (4 hrs.) College Algebra or higher level math

Arts and Humanities

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

Historical

- \_\_\_ (3 hrs.)

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

- \_\_\_ 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.) may be satisfied within General Studies

MAJOR COURSES (Please see a Faculty Advisor)

**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)

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

**Multicultural Requirement**

(may be satisfied within General Studies, major, minor, or as an elective)

**ELECTIVES**