

Biology, B.S., Cell and Molecular Concentration

303-556-3213 Science Building 2042

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	41-42
Major courses	35
CCA courses	8
Minor/second major in Chemistry	26
Electives	10
Total to graduate (min. 40 hrs upper-division)	120 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-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*

- ___ (3 hrs.)

Quantitative Literacy*

- ___ MTH 1110 (4 hrs.) College Algebra or higher level math
- ___ MTH (3-4 hrs.)

Arts and Humanities

- ___ (3 hrs.)
- ___ (3 hrs.)

Historical

- ___ (3 hrs.)

Natural and Physical Sciences

- ___ CHE1800 (4 hrs.) General Chemistry I
- ___ CHE1810 (4 hrs.) General Chemistry II
- ___ CHE1850 (2 hrs.) General Chemistry 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)

- ___ BIO 1080 (3 hrs.) General Biology I
- ___ BIO 1090 (1 hrs.) General Biology Lab I
- ___ BIO 1081 (3 hrs.) General Biology II
- ___ BIO 1091 (1 hrs.) General Biology Lab II
- ___ BIO 2400 (5 hrs.) General Microbiology
- ___ BIO 3020 (2 hrs.) Laboratory Techniques
- ___ BIO 3050 (4 hrs.) Cell and Molecular Biology
- ___ BIO 3600 (4 hrs.) General Genetics (check catalog for prerequisites)
- ___ BIO 3980/4980 (2 hrs.) Internship/Independent Study
- ___ BIO 4060 (2 hrs.) Cellular and Molecular Biology Laboratory
- ___ BIO 4510 (4 hrs.) Microbial Ecology (Senior Experience)

Additional upper-division, biology courses must be completed. The total number of semester hours required in biology is 40, 21 of which must be upper-division (3000-4000 level courses). Electives must be chosen from the following list, unless pre-approved by a biology faculty advisor:

- ___ BIO 3350 (4 hrs.) Immunology
- ___ BIO 4050 (4 hrs.) Advanced Cell and Molecular Biology
- ___ BIO 4070 (3 hrs.) Biology of Cancer
- ___ BIO 4440 (3 hrs.) Virology
- ___ BIO 4470 (4 hrs.) Microbial Genetics
- ___ BIO 4820 (4 hrs.) Developmental Biology

Required Non-Biology courses

One year of math starting with MTH 1110 or higher (see General Studies)

CHEMISTRY MINOR REQUIRED or second major in Chemistry.

Multicultural Requirement

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

MINOR (required)

ELECTIVES