

# ACADEMIC PLANNING SHEET

## B.S. BIOLOGY CELLULAR & MOLECULAR BIOSCIENCES EMPHASIS

COLORADO STATE UNIVERSITY – PUEBLO

2016-2017 CATALOG

Dr. Dan Caprioglio, Professor

(719) 549-2027 EMAIL: [dan.caprioglio@csupueblo.edu](mailto:dan.caprioglio@csupueblo.edu)

Dr. Brian Vanden Heuval, Professor and Department Chair

(719) 549-2270 EMAIL: [brian.vandenheuval@csupueblo.edu](mailto:brian.vandenheuval@csupueblo.edu)

Ms. Theresa Jiminez, Administrative Assistant

PHONE: 549-2743 EMAIL: [theresa.jiminez@csupueblo.edu](mailto:theresa.jiminez@csupueblo.edu)

	Fall Semester		Spring Semester	
<b>First Year</b>	ENG 101: English Composition I BIOL 171: First Year Seminar BIOL 181/L: College Biology I/Organismal Bio/Lab CHEM 121/121L: General Chemistry I/Lab	3 1 4 5	ENG 102: English Composition II BIOL182/L: College Biology II/Cellular Bio/Lab CHEM 122/122L: General Chemistry/Lab MATH 221: Applied Calculus	3 4 5 4
	<b>TOTAL SEMESTER HOURS</b>	<b>13</b>	<b>TOTAL SEMESTER HOURS</b>	<b>16</b>
<b>Second Year</b>	BIOL 201/201L: Botany/Lab (Spring) OR BIOL 202/202L: Zoology/Lab (Fall) CHEM 301/301L: Organic Chemistry I/Lab PHYS 201/201L: Principles of Physics I/Lab OR PHYS 221/221L: General Physics I/Lab (Spring) MATH 156: Introduction to Statistics	4  5 4-5 3	BIOL 350: Mendelian and Pop. Genetics CHEM 302/302L: Organic Chemistry II/Lab PHYS 202/202L: Principles of Physics II/Lab OR PHYS 222/222L: General Physics II/Lab (Fall) COMR 103: Speaking and Listening General Education Course: History	2 5 4-5 3 3
	<b>TOTAL SEMESTER HOURS</b>	<b>16-17</b>	<b>TOTAL SEMESTER HOURS</b>	<b>17-18</b>
<b>Third Year</b>	BIOL 301/301L: General Microbiology/Lab CHEM 311: Survey of Biochemistry OR CHEM 411: Biochemistry I General Education Course: Humanities General Education Course: Social Science	5 3  3 3	BIOL 351: Molecular Biology and Genetics BIOL 351L: Adv. Genetics & Molecular Biology Lab BIOL 352: Evolutionary Biology and Ecology General Education Course: Social Science General Education Course: Humanities General Electives	2 2 3 3 3 3
	<b>TOTAL SEMESTER HOURS</b>	<b>14</b>	<b>TOTAL SEMESTER HOURS</b>	<b>16</b>
<b>Fourth Year</b>	Advisor Approved Upper Div. Biology Electives General Electives	7 7	BIOL 412/L Cellular Biology BIOL 493: Senior Seminar Advisor Approved Upper Division Biology Elective General Electives	4 1 3 6
	<b>TOTAL SEMESTER HOURS</b>	<b>14</b>	<b>TOTAL SEMESTER HOURS</b>	<b>14</b>

The Academic Planning Sheet is designed as a guide for students planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic adviser. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.

**General Education Requirements: 21 semester hours**

- ENG 101: English Composition I (3)
- ENG 102: English Composition II (3)
- Mathematics Course (3)
  - MATH 156: Introduction to Statistics* (3)
- Humanities Courses (9)
  - COMR 103: Speaking and Listening* (3)
- History Course (3)
- Social Sciences Courses (6)
- Natural and Physical Sciences Courses (8) (2 courses with labs)
  - BIOL 181/L: College Biology I/Organismal Bio/Lab* (4)
  - BIOL 182/L: College Biology II/Cellular Bio/Lab* (4)

<b>Course Completed elsewhere</b>	<b>CSU-Pueblo equivalent</b>
(Ex: English 101)	(Ex: English 101)

**Major Requirements:****Core Requirements for Major to include BIOL 412/L: 30 semester hours**

- BIOL 171: First Year Seminar (1)
- BIOL 181/L: College Biology I/Organismal Bio/Lab* (4)
- BIOL 182/L: College Biology II/Cellular Bio/Lab* (4)
- BIOL 201/L: Botany/Lab (4)
  - OR
- BIOL 202/L: Zoology/Lab (4)
- BIOL 301/L: General Microbiology/Lab (5)
- BIOL 350: Mendelian & Population Genetics (2)
- BIOL 351: Molecular Biology and Genetics (2)
- BIOL 352: Evolutionary Biology and Ecology (3)
- BIOL 412/L: Cellular Biology/Lab (4)
- BIOL 493: Seminar (1)

**Institutional Graduation Requirements:**

- Total of 120 semester hours, minimum.
- Complete a minimum of 40 semester hours in upper-division courses.
- Overall cumulative grade point average of 2.00.
- A minimum of 60 semester hours must be earned from a four-year institution. Of these, a minimum of 30 semester hours of credit must be earned in residence.
- Of the last 30 semester credits earned immediately preceding graduation, no more than 15 may be completed at other colleges or universities.
- All other requirements as specified in the Catalog.

**Additional Major Graduation Requirements**

- Student majoring in Biology must receive a grade of C or better in all core biology courses.
- Students must have at least a cumulative GPA of 2.000 in the major area.
- Students majoring in biology must demonstrate computer literacy. This can be met by CIS 100, CIS 103 and CIS 104 courses.

**Basic Cellular & Molecular Biosciences: 15 semester hours**

- BIOL 351L: Adv. Genetics & Molecular Biology Lab (2)
- CHEM 311: Survey of Biochemistry (3)
  - OR
- CHEM 411: Biochemistry I (3)
- Advisor approved Upper Division Biology Electives (10)  
(Listed as “Advisor Approved Upper Division Biology Elective” on the first page)

**Required Support Courses: 38-40 semester hours**

- CHEM 121/L: General Chemistry I/Lab I (5)
- CHEM 122/L: General Chemistry II/Lab II (5)
- CHEM 301/L: Organic Chemistry I/Lab I (5)
- CHEM 302/L: Organic Chemistry II/Lab II (5)
- MATH 156: Introduction to Statistics* (3)
- MATH 221: Applied Calculus (4)
- PHYS 201/L: Principles of Physics I/Lab I (4)
  - AND
- PHYS 202/L: Principles of Physics II/Lab II (4)
  - OR
- PHYS 221/L: General Physics I/Lab (5)
  - AND
- PHYS 222/L: General Physics II/Lab (5)
- COMR 103: Speaking and Listening* (3)

(Courses *italicized* meet General Education requirements)**General Electives: 16 semester hours**

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