

CURRICULUM FOR CELL AND MOLECULAR BIOLOGY MAJOR (BEGINNING FALL 2017)

<i>Required Courses</i>	<i>Credits</i>
BL 155, 157 Principles of Biology 1 and laboratory	4
BL 156, 158 Principles of Biology 2 and laboratory	4
BL 213 Genetics	4
BL 459 Molecular Cell Biology	3
BL 465 Molecular Genetics	3
BL 470 Molecular Methods Lab	3
CH 141-144 General Chemistry 1, 2 with labs (or CH 151/L)	10 (or 5 for CH151/L)
CH 221-224 Organic Chemistry 1, 2 with laboratories	8
CH 435 Biochemistry 1 (3 cr.) or CH431 General Biochemistry (4 cr.)	3-4
CH 437 Biochemistry Laboratory	1
MT 135 Calculus and Analytical Geometry	4
MT 228 Biostatistics	3
PH 125 and 125L General Physics 1 and laboratory	4
PH 126 and 126L General Physics 2 and laboratory	4
 <i>Electives (3 courses from this list):</i>	
BL 159, 160 Principles of Biology 3 and laboratory	4
BL 215/L Introduction to Biotechnology Laboratory	3
BL 301 Introduction to Cell Biology	3
BL 302 Developmental Biology	3
BL 310, 310L Microbiology	4
BL 399 Spec. Probl. in Bio. or CH 399 Undergrad Res. or BL 295 Undergrad Res.	3
BL 410 Medical Microbiology	3
BL 471 Immunology	3
BL 475 Endocrinology	3
CH 436 Biochemistry 2	3

Total credit hours for major is 67-70 credits

Notes:

Students must earn B- or better in BL 213 Genetics or have instructor permission in order to take BL459, BL465, and BL470. Elective credit will only be granted for BL 215/L if taken before BL 470.

SAMPLE 4-YEAR SCHEDULE FOR CELL AND MOLECULAR BIOLOGY MAJORS (FALL 2017-NEW INTEGRATIVE CORE)

1st year Fall (15 cr):

3 cr. BL155 Principles of Biology 1
1 cr. BL157 Principles of Biology 1 Lab
4 cr. CH141 General Chemistry 1
1 cr. CH143 General Chemistry 1 Lab
3 cr. Written expression
3 cr. Foreign Language

1st year Spring (15 cr):

3 cr. BL156 Principles of Biology 2
1 cr. BL158 Principles of Biology 2 Lab
4 cr. CH142 General Chemistry 2
1 cr. CH144 General Chemistry 2 Lab
3 cr. Oral expression
3 cr. Foreign Language

2nd year Fall (14 cr):

3 cr. CH221 Organic Chemistry 1
1 cr. CH223 Organic Chemistry 1 Lab
4 cr. MT135 Calculus and Analytical Geometry
3 cr. PL-VS
3 cr. TRS Lower Division

2nd year Spring (14 cr):

4 cr. BL213 Genetics (or in Fall)
3 cr. CH222 Organic Chemistry 2
1 cr. CH224 Organic Chemistry 2 Lab
3 cr. MT228 Biostatistics (Quantitative Analysis)
3 cr. ISJ

3rd year Fall (14 cr):

3 cr. PH125 General Physics 1
1 cr. PH125L General Physics 1 Lab
3 cr. CH435 Biochemistry 1
1 cr. CH437 Biochemistry Lab (offered every semester)
6 cr. Link

3rd year Spring (13 cr):

3 cr. PH126 General Physics 2
1 cr. PH126L General Physics 2 Lab
3 or 4 cr. CMB elective
3 or 4 cr. CMB elective
3 cr. Social Science

4th year Fall (13-14 cr):

3 or 4 cr. CMB elective
3 cr. BL459 Molecular Cell Biology
3 cr. Humanities
1 cr. Creative and Performing Arts
3 cr. Engaging the Global Community

4th year Spring (12 cr):

3 cr. BL465 Molecular Genetics
3 cr. BL470 Molecular Methods Lab
3 cr. PL-KR
3 cr. TRS Upper Division

CMB electives are listed below by the semester(s) that they are **typically** offered. This is not a guarantee that each course will be offered every year or in a given semester. CMB majors must take 3 CMB electives. Also, note this schedule has CH435/437 and not CH431/437 in it. If a student selects CH435/436 (i.e., CH 436 as a CMB elective), they will earn a Chemistry minor. **Keep in mind that additional electives will be needed to get to 120 credits.**

Fall:

BL159, 160 Principles of Biology 3 and Lab
BL471 Immunology
BL475 Endocrinology
BL301 Introduction to Cell Biology
BL302 Developmental Biology

Spring:

BL410 Medical Microbiology
BL470 Molecular Methods Laboratory

Both semesters:

BL215/L Introduction to Biotechnology Lab
BL310/L Microbiology
BL399 Independent study
BL 295 Undergraduate Research