

## **CURRICULUM FOR BIOLOGY MAJOR**

<i>Required Courses</i>	<i>Credits</i>
BL 155-160 Principles I, II, III and labs	12
BL 213 Genetics	4

### *Cell-to-organism (at least one course):*

BL 230/L and 231/L Human anatomy and Physiology 1 and 2 with labs	8
BL 302 Developmental Biology	3
BL 350/350L Vertebrate Anatomy	5
BL 360/360L Human Physiology	4
BL 410 Medical Microbiology	3
BL 420 Plant Physiology	3
BL 471 Immunology	3
BL 475 Endocrinology	3

### *Organism-to-biosphere (at least one course):*

BL 206 Tropical Biology (taught in Costa Rica)	3
BL 222 Principles of Ecology	3
BL 224/224L Terrestrial Ecology	4
BL 255 Local Summer Flora	4
BL 331 Global Climate Change	3
BL 370 Evolution	3
BL 406 Tropical Field Biology	3
BL 423/423L Biology of Amphibia	4
BL 424/424L Aquatic Resources	4
BL 426/426L Biology of the Reptilia	4
BL 435/435L Plant Ecology	4
BL 444/444L Advanced Ecology	4
BL 447/447L Algae as Bioindicators	4
BL 454/454L Desert Biology (lab optional)	3 or 4

### *One 400-level course*

### *Major Field Achievement Test in Biology*

### **34 Total Biology credit hours needed**

### *Required support courses:*

CH 141-144 General Chemistry I and II and labs	10
CH 221-224 Organic Chemistry I and II and labs	8
MT 135 Calculus and Analytical Geometry	4
MT 228 Biostatistics	3

### *ONE of these classes may count towards Biology major credit (but not the 400-level BL course requirement)*

CH 431 General Biochemistry (4 BL credits)	
CH 435-436 Biochemistry 1 and 2 (4 BL credits)	
PS 326 Psychobiology (3 BL credits)	
PS 426 Psychopharmacology (3 BL credits)	

SAMPLE 4-YEAR SCHEDULE FOR BIOLOGY MAJORS WITH PRE-MED (FALL 2017- INTEGRATIVE CORE)

1<sup>st</sup> year Fall (15 cr):

3 cr. BL155 Principles of Biology 1 (Nat Sci)  
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

1<sup>st</sup> 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

2<sup>nd</sup> year Fall (15 cr):

3 cr. CH221 Organic Chemistry 1  
1 cr. CH223 Organic Chemistry 1 Lab  
4 cr. MT135 Calculus and Analytical Geometry  
3 cr. BL159 Principles of Biology 3  
1 cr. BL160 Principles of Biology 3 Lab  
3 cr. TRS Lower Division

2<sup>nd</sup> 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. PS100 (ISJ)

3<sup>rd</sup> year Fall (16 cr):

3 cr. PH125 General Physics 1  
1 cr. PH125L General Physics 1 Lab  
6 cr. Linked course  
3 cr. PL-KR  
3 cr. BL elective

3<sup>rd</sup> year Spring (14 cr):

3 cr. PH126 General Physics 2  
1 cr. PH126L General Physics 2 Lab  
3 cr. SC101 (Social Science course)  
4 cr. CH431 General Biochemistry  
3 cr. PL-VS

4<sup>th</sup> year Fall (11 cr):

3 cr. BL elective  
4 cr. BL elective  
1 cr. Creative and Performing Arts  
3 cr. Issues in Social Justice  
Need electives to be full-time & reach 120 cr

4<sup>th</sup> year Spring (13 cr):

4 cr. BL elective  
3 cr. Humanities course  
3 cr. Engaging the Global Community  
3 cr. TRS 3XX course  
Need elective course to reach 120 cr

Upper-level classes of interest to pre-med/dental students 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. Also, keep in mind that every Biology major must take at least one 400-level course, one cell-to-organism course, and one organism to biosphere course.

Fall:

BL240 Epidemiology  
BL260 Poverty and Disease  
BL459 Molecular Cell Biology  
BL471 Immunology  
BL475 Endocrinology

Spring:

BL301 Introduction to Cell Biology  
BL302 Developmental Biology  
BL350 Vertebrate Anatomy  
BL410 Medical Microbiology  
BL465 Molecular Genetics  
BL470 Molecular Methods Laboratory

Both semesters:

BL215/L Introduction to Biotechnology

BL230/L and 231/L Human Anatomy and Physiology (year-long course—intended for allied health—not pre-med)

BL310/L Microbiology

BL360/L Human Physiology

\*\*Schedule is 119 hours (1 hour needed)

\*\*\*Please see previous page for notes about the major.

SAMPLE 4-YEAR SCHEDULE FOR BIOLOGY MAJORS (FALL 2017- INTEGRATIVE CORE)

1<sup>st</sup> year Fall (15 cr):

3 cr. BL155 Principles of Biology 1 (Nat Sci)  
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

2<sup>nd</sup> year Fall (15 cr):

3 cr. CH221 Organic Chemistry 1  
1 cr. CH223 Organic Chemistry 1 Lab  
4 cr. MT135 Calculus and Analytical Geometry  
3 cr. BL159 Principles of Biology 3  
1 cr. BL160 Principles of Biology 3 Lab  
3 cr. TRS Lower Division

3<sup>rd</sup> year Fall (12 cr):

6 cr. Linked course  
3 cr. PL-KR  
3 cr. BL elective  
Need elective course to reach 120 cr

4<sup>th</sup> year Fall (11 cr):

3 cr. BL elective  
4 cr. BL elective  
1 cr. Creative and Performing Arts  
3 cr. TRS 3XX course  
Need electives to be full-time & reach 120 cr

1<sup>st</sup> 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

2<sup>nd</sup> 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

3<sup>rd</sup> year Spring (10 cr):

3 cr. SC101 (Social Science course)  
4 cr. BL elective  
3 cr. PL-VS  
Need electives to be full-time & reach 120 cr

4<sup>th</sup> year Spring (13 cr):

4 cr. BL elective  
3 cr. Humanities course  
3 cr. Engaging the Global Community  
Need elective course to reach 120 cr

Keep in mind that every Biology major must take at least one 400-level course, one cell-to-organism course, and one organism to biosphere course.