

**CURRICULUM GUIDE**  
**Biology, B.S. (Biodiversity & Conservation Concentration)**  
**2022-2023**

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The schedule below is an **EXAMPLE** of how you can arrange your class schedule.  
 Please consult your advisor for specific changes that may need to be made.

	Fall Semester		Spring Semester	
<b>Freshman Year</b>	SCO 100B	1	BIO 112	4
	BIO 111	4	CHE 112	3
	<sup>g</sup> CHE 111 (fulfills Gen. Ed. 4)	3	CHE 112L	1
	CHE 111L	1	Gen. Ed. 1B (ENG 102)	3
	Gen. Ed. 1A (ENG 101)	3	<sup>g</sup> MAT 234 <u>or</u> 211 (fulfills Gen. Ed. 2)	3-4
	Gen. Ed. 5B (Soc. & Behav. Sci.)	3	Free Elective	0-1
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>15</b>	
<b>Sophomore Year</b>	BIO 318	4	BIO 319	4
	CHE 361	3	Diversity of Life Elective	3-4
	CHE 361L	1	Special Skills Elective	3
	STA 215 <u>or</u> 270	3-4	Gen. Ed. 1C (Oral Comm.)	3
	Gen. Ed. 3A (Arts)	3	Free Elective	1-2
	Free Elective	0-1		
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>15</b>	
<b>Junior Year</b>	BIO 316	4	BIO 320 (ACCT)	4
	<sup>g</sup> PHY 131 <u>or</u> 201 (fulfills Gen. Ed. 4)	5	Gen. Ed. 5A (History)	3
	Earth & Environmental Science Elective	3-4	Gen. Ed. 6 (Diversity)	3
	Gen. Ed. 6 (Diversity)	3	Free Elective (upper division)	3
			Free Elective	1-2
	<b>TOTAL</b>	<b>15-16</b>	<b>TOTAL</b>	<b>14-15</b>
<b>Senior Year</b>	BIO 315	4	BIO 495	1
	<sup>h</sup> BIO 532	3	Gen. Ed. 3B (Humanities) <u>or</u> Specialized Ecology & Behavior Elective	3
	Diversity of Life Elective	3-4	BIO 514	3
	Gen. Ed. 3B (Humanities) <u>or</u> Specialized Ecology Behavior Elective	3	Free Elective	3
	Free Elective	1-2	Free Elective	3
			Free Elective (upper division)	2
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>15</b>	
<b>TOTAL HOURS TO DEGREE COMPLETION</b>		<b>120</b>		

\* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division BIO courses. CHE 111/111L, 112/112L, 361, and/or 366; MAT 114 or higher; GEO 100, 210, 220; GLY 102, 104, 107, 108, 109. NOTE: GLY 315 has a prerequisite of GLY 102, 104, 107, 108, 109 which is not built into the program above.

<sup>h</sup> Due to variable course hour choices of some requirements, marked free electives may also be variable. Consult with your advisor to ensure you have a minimum of 12 hours per semester to maintain full-time standing and 120 total credit hours for graduation.

<sup>h</sup> **500 Level Courses:** Approval to enroll in a 500-level course before a student has attained senior status (90 or more hours) requires approval from the dean of the college offering the course.

**Upper division courses:** All students are required to have a minimum of 42 hrs. upper division (300-level or above) courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories. If 300 level classes are taken for Gen. Ed., they can be used to fulfill the 42 hours instead of upper division free electives.

Refer to the University Catalog at <http://www.catalogs.eku.edu/> regarding University and General Education Requirements. All baccalaureate degree seeking students who enter the University are required to successfully complete one writing intensive course following completion of the ENG 102, ENG 105, or HON 102/103. Writing intensive courses are designated with the suffix "W" following the course prefix and number (e.g. HUM 300W).

**Applied Critical & Creative Thinking (ACCT) Requirement:** Biology majors will fulfill ACCT with one of the following: BIO 320, 349, 598, HON 420 with a thesis topic approved by the Biology department, a program-approved leadership experience, or a program-approved study abroad experience. (Credit hours are incorporated into program requirements.)

Course Number	Course Name
<b>GENERAL EDUCATION &amp; UNIVERSITY REQUIREMENTS (37)</b>	
SCO 100B	Student Success Seminar in Biology (1)
<b>CORE COURSE REQUIREMENTS (29)</b>	
BIO 111	Cell and Molecular Biology (4)
BIO 112	Ecology and Evolution (4)
BIO 315	Genetics (4)
BIO 316	Ecology (4)
BIO 318	Botany (4)
BIO 319	Zoology (4)
BIO 320	Principles of Microbiology (4)
BIO 495	Evolution Theory and Application (1)
<b>BIODIVERSITY &amp; CONSERVATION CONCENTRATION REQUIREMENTS (15-17)</b>	
BIO 514	Evolution (3)
BIO 532	Conservation Biology (3)
PLUS SIX (6) HOURS selected from (Diversity of Life Elective):	
BIO 335	Plant Systematics (3)
BIO 342	Comparative Vertebrate Anatomy (4)
BIO 525	Aquatic and Wetland Plants (3)
BIO 528	Virology (3)
BIO 536	Dendrology (3)
BIO 542	Freshwater Invertebrates (3)
BIO 548	Insect Diversity (3)
BIO 553	Mammalogy (3)
BIO 554	Ornithology (3)
BIO 556	Herpetology (3)
BIO 557	Ichthyology (3)
BIO 595	Topics in Field Biology (3)
PLUS THREE (3) HOURS selected from (Specialized Ecology & Behavior Elective):	
BIO 349	Co-op/Internship (1-3)
BIO 520	Invasive Species (3)
BIO 521	Plant Ecology (4) (fall only)
BIO 550	Animal Behavior (4)
BIO 555	Behavioral Ecology (3)
BIO 558	Freshwater Ecology (3)
BIO 561	Fisheries Biology (3)
BIO 598	Special Problems (1-6)
<b>SUPPORTING COURSE REQUIREMENTS (20-23)</b>	
<sup>g</sup> CHE 111	General Chemistry I (3)
CHE 111L	General Chemistry Lab I (1)
* CHE 112	General Chemistry II (3)
* CHE 112L	General Chemistry Lab II (1)
* CHE 361	Organic Chemistry I (3)
* CHE 361L	Organic Chemistry Lab I (1)
<sup>g</sup> MAT 234 <u>or</u> <sup>g</sup> MAT 211	Calculus I (4)
<sup>g</sup> PHY 131 <u>or</u> PHY 201	Applied Calculus (3)
PHY 201	College Physics I (5)
PHY 201	University Physics I (5)
STA 215 <u>or</u> * STA 270	Intro. to Statistical Reasoning (3)
* STA 270	Applied Statistics I (4)
Bracketed items must be taken concurrently.	
PLUS THREE (3) HOURS selected from (Special Skills Elective)	
CSC 174	Introduction to Programming for Science and Engineering (3)
* GEO 353	Geographic Information Systems (3)
PLUS THREE (3) HOURS selected from (Earth & Environmental Science Elective):	
AGR 215 <u>and</u> AGR 216	Principles of Soils (3)
* GEO 302W	Principles of Soils Laboratory (1)
	Global Environmental Problems (3) (writing intensive)
	Environmental Land Use Planning (3)
* GEO 325	Biogeography (3)
* GEO 435	Environmental Geosciences (3)
* GLY 303	Hydrology (3)
* GLY 315	
<b>FREE ELECTIVES (14-19)</b>	

<sup>g</sup> Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.