

**BIOLOGY MAJOR**

Student Name \_\_\_\_\_

**GENETICS & DEVELOPMENTAL BIOLOGY**

PSU ID \_\_\_\_\_

**CREDITS NOT APPLICABLE FOR GRADUATION**

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**TOTAL DEPARTMENTAL CREDIT REQUIREMENTS FOR GRADUATION: 124 CREDITS**

Communication (9 cr)	
ENGL 15 or ENGL 30 (3)	
ENGL 202A,202B,202C,202D(3)	
CAS 100 (3)	

Quantification (8 cr)	
**MATH 140 (4)	
MATH 141 (4)	

General Chemistry (8 cr)	
**CHEM 110 (3)	
CHEM 111 (1)	
**CHEM 112 (3)	
CHEM 113 (1)	

Biology Core Courses (16cr)	
** BIOL 110 (4)	
** BIOL 220W (4)*	
** BIOL 230W (4)*	
** BIOL 240W (4)*	
*These courses = 1 "W" Credit	

Arts (6 cr)	
GA (3)	
GA (3)	

Humanities (6 cr)	
GH (3)	
GH (3)	

Social & Behavioral Sciences (6 cr)	
GS (3)	
GS (3)	

Physics (8 - 12 cr)	
PHYS 250 (4)	
PHYS 251 (4)	
or	
PHYS 211 (4)	
PHYS 212 (4)	
PHYS 213 (2)	
PHYS 214 (2)	

Organic Chemistry (8 cr)	
CHEM 210 (3)	
CHEM 212 (3)	
CHEM 213 (2)	

Statistics (3-4 cr)	
STAT 200 (4), 240 (3), 250 (3),	

Biochemistry & Molecular Biology (6 cr)	
BMB 401 (3)	
BMB 402 (3)	

Additional Courses (2-5 cr)	
BIOL 322	
Select 2-5 credits from MATH 220 (2), 231 (2), MICRB 201 (3), 202 (2)	

Health & Physical Activity (3 cr)	
Courses with a GHS, GPE, or GHA label can fulfill this category	

<ul style="list-style-type: none"> <li>• _____ <i>United States Cultures Requirement (3 credits US)</i></li> <li>• _____ <i>International Cultures Requirement (3 credits IL)</i></li> </ul>	
PSU 016 (1)	

400-Level Biology Courses (15 cr total)	
BIOL 430 (3)	

Select a minimum of 12 credits of 400-level courses, with at least 6 credits from Group I, 3 credits from Group II, and 3 credits from Group III		
Group I Genetics/ Developmental Biology	Group II Evolutionary Biology	Group III Practicum
BIOL 404 BIOL 405 BIOL 416 BIOL 422 BIOL 426 BIOL 428 BIOL/BMB/ENT 430 BIOL 432 BIOL 443 BIOL 451 BIOL/ANTH 460 BIOL 467 BIOTC/HORT 459 BMB 400 BMB 450 BMB 464 HORT 407	BIOL 405 BIOL 406 BIOL 414 BIOL 417 BIOL/GEOSC 420 BIOL/VB SC 421 BIOL 422 BIOL/PPEM 425 BIOL 427 BIOL 429 BIOL 432 BIOL 433 BIOL 434 BIOL 436 BIOL 439 BIOL 443 BIOL 451 BIOL/ANTH 460 BIOL 463 BIOL 464 BIOL/GEOSC 474	BIOL 400 BIOL 407 BIOL 414 BIOL 417 BIOL 419 BIOL/VB SC 421 BIOL 422 BIOL/PPEM 425 BIOL 433 BIOL 437 BIOL 450W BIOL 473 BIOL 482 (4 cr only) BIOL 499A BIOL 496 BIOL 251 SC 295 SC 395 SC 495
A maximum of 3 credits of Bio 496 or 4 credits of SC 295, SC 395, SC 495 may be used to fulfill the 18 credit minimum in the 400-level biology course requirement.		

Supporting Courses & Related Areas: Electives (10 - 18 cr) to complete 124 credits	

**\*\* Grade of C or better is required.**

**Requirements for entry of major as of February 2014**

1. **Disallowed credits:** The following courses **MAY NOT** be used for credit (**NOT EVEN AS ELECTIVES**) towards a degree in Biology and will **NOT** be counted towards graduation:

BMB 1	CAS 126
BI SC 1, 2, 3, 4	MICRB – No course under 199
BIOL 11, 12, 33, 55	PH SC 1, 150, 151
CHEM 101, 103, 106, 108	LL ED 5, 10
ENGL 4, 5	PHYS 1
ESL 4	More than 9 credits of SC 295, 395, 495
MATH – no course under 140**	Course Duplications

**\*\*Please note that in the following courses only a specified number of the credits count towards graduation:**

- MATH 140A (only 4 out of 6 credits count)
- CHEM 106 (only 3 out of the 5 credits count)

**However, all credits earned at Penn State count in determining your grade point average (GPA).**

**Moreover, students may take only one course for General Education credit from:** HD FS 129 (GS) or SOC 030 (GS); PHIL 001 (GH) or PHIL 004 (GH); LARCH 003 (GA) or LARCH 060 (GA); SOC 001 (GS) or R SOC 011 (GS).

Any exceptions need to be petitioned through an adviser in 114 Ritenour and will be evaluated by Dr. Richard Cyr on a case-by-case basis.

2. **Writing Across the Curriculum requirement** (3 credits of “W” are required). For majors in Biology, this requirement can be met by taking BIOL 220W, 230W and 240W, each carrying one credit of “W”. Another course currently offered in the Department of Biology with “W” credit is 450W. Note that other courses within the Eberly College of Science can be used to fulfill this requirement.

3. **Elective (Supporting) Courses:** Elective credit totals vary with the option. Total elective credits range between 10 to 26 credits, depending on option and course selection. Choose your electives carefully.

4. **Petition for course substitutions or waivers of requirements.** Any exceptions need to be petitioned through an adviser in the Biology Undergraduate Advising Office in 114 Ritenour (814-865-2329) and will be evaluated by Dr. Richard Cyr on a case-by-case basis.

5. **A minimum of 124 credits is required to graduate with a major in Biology.** Add up your credits **carefully** and **always** check your total credit early in the semester you plan to graduate!

6. **Check the bulletin board in the Biology Undergraduate Advising Office for new course offerings** in the Department of Biology.

7. **Select both United States Cultures and International Culture course carefully.** You may be able to select a course which will also satisfy the general education requirements in Arts, Humanities or Social and Behavioral Sciences. For example, SOC 119 – Race and Ethnic Relations – will satisfy both GS and US requirements but will only count as 3 or 4 credits towards the 124 credits required for graduation (Soc 119 is a variable credit course). To clarify, from the Undergraduate Advising Handbook “A student must complete 3 credits in US and 3 credits in IL. If a student takes a 3-credit course that is both US and IL, he/she must take another 3-credit course that is US, IL, or both US and IL to complete the requirement. Education abroad courses and other credit-bearing experiences such as internships that meet this requirement will be designated as US, IL, or both US and IL.”