## Education Major with Teaching Biology Concentration

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## About

The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined BA/MA in Education. The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

**Program:** Education and Counseling **Type:** Bachelor of Arts

## PRIMARY MAJOR (124 credits)

To be accepted into the major, students must have a 3.0 GPA, 6 credits in English and 6 credits in math completed prior to the start of their junior year. Candidates for the major should apply as soon as possible and no later than sophomore year

# Required Major Credits (46 credits + Concentration)

In addition to demonstrating competence within their chosen academic discipline, as well as fulfilling the College of Arts and Sciences' core curriculum requirements, students participate in a wide variety of classroom field experiences. Such experiences are carefully selected and supervised and always appropriate to both the academic and professional competence of the students.

Program Notes:

- PDE requires all Education Majors to take two Math and two English courses before the end of their sophomore year. This is part of the state certification requirement. One English is taken as part of the Core.
- Teacher certification is embedded within the B.A. program. Visit this page to learn more.

Course	Title	Credits
	EDU 2201 or EDU 2202	3
EDU 2300	Research Seminar in Education	3
EDU 3000	Prof. Development in Education	1
EDU 3251	Psych of Teaching & Learning	3
EDU 3263	Diversity and Inclusion	3
EDU 3264	Intro to Disability Studies	3
EDU 4245	Literacy & Eng Lang Learning	3
EDU 4284	Meth Science Sec School	3
EDU 4290	Philosophy of Education	3
EDU 3011	Pre-Practicum & Seminar 1	1
EDU 3012	Pre-Practicum & Seminar 2	1
EDU 3013	Pre-Practicum & Seminar 3	1
EDU 4291	Student Teaching	9
EDU 4292	Senior Seminar	3
	MAT 1314 or MAT 1505	3-4
	Advanced English Elective for EDU BIO	3

## Teaching Biology Concentration (48 credits)

Concentration Notes:

- Students must be a declared education major to have this concentration.
- Students in the education major with a biology emphasis fulfill their core math, core natural science, and core social science with courses taken in the major.

Course	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 3055	Human Physiology	4
BIO 3351	Genetics	4
BIO 3255	Evolutionary Ecology	4
BIO 3595	General Microbiology	4
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
MSE 2206	BIO:Biotechnology in Our Soc.	4
	MAT 1312 or MAT 1500	4
	Electives for Education BIO Concentration	11-12

# Core Curriculum Requirement (27 credits)

Education Majors with the Teaching Biology Concentration meet the following core requirements in the major and therefore are omitted from the summary below:

- Core Math (3 cr)
- Natural Science (8 cr)
- Social Science (6 cr)

Course	Title	Credits
ACS 1000	Ancients	3
ACS 1001	Moderns	3
THL 1000	Faith, Reason, and Culture	3
PHI 1000	Knowledge, Reality, Self	3
ETH 2050	The Good Life:Eth & Cont Prob	3
	Literature and Writing Seminar (1 course)	3
	History (1 course)	3
	Fine Arts (1 course)	3
	Upper-Level Theology (1 course)	3
	Language Requirement	
	Diversity Requirement (2 courses)	

### Free Elective Requirement (3 credits)

Students with an Education primary major with a concentration in Teaching Biology have three (3) required free elective credits.

## Degree Credit Summary

- Major Credits: 46-47 credits
- **Concentration:** 48-49 credits
- Core Credits: 27 credits
- Free Electives Credits: 3 credits
- Total Required Credits: 124-126 Credits

Note: The above credit totals are based on the minimum number of required credits in each degree area. The minimum number of required credits in each area listed above must be met. Credits taken beyond the required minimum for one area may not be applied to another area.

## **Category Descriptions**

### EDU 2201 or EDU 2202

Credits: 3		
Course	Title	Credits
EDU 2201	Social Foundation Educ I	3
EDU 2202	Social Foundation Edu II	3

### MAT 1314 or MAT 1505

#### Credits: 3-4

- MAT 1312 and MAT 1314 must be taken as a sequence.
- MAT 1500 and MAT 1505 must be taken as a sequence.

Course	Title	Credits
MAT 1314	Modeling for the Life Sciences	3
MAT 1505	Calculus II	4

### Advanced English Elective for EDU BIO

#### Credits: 3

• Take one three credit (3 cr) Advanced English elective, ENG 1000:5000, except ENG 1975.

### MAT 1312 or MAT 1500

#### Credits: 4

#### **Biochemistry Majors**:

MAT 1312 may only count toward the requirements of the biochemistry major with permission of the program director.

#### **CBN Majors**:

- MAT 1312 and MAT 1314 must be taken as a sequence.
- MAT 1500 and MAT 1505 must be taken as a sequence.

Course	Title	Credits
MAT 1312	Biocalculus	4
MAT 1500	Calculus I	4

### **Electives for Education BIO Concentration**

Credits: 11-12

Choose three from the options below.

Course	Title	Credits
BIO 3485	Marine Biology	4
	CHM 2211 & 2201	4
GEV 3580	Natural Res and Conservation	3
	PHY 1100 & 1101	4
MSE 2200	BIO:Behavioral Bio of Animals	4
MSE 2201	BIO:How Microbes Rule World	4
MSE 2202	BIO:Biology and Politics	4
MSE 2203	BIO:Heredity & Human Affairs	4
MSE 2204	BIO:How The Body Works	4
MSE 2205	BIO:Biodiversity& Conservation	4
MSE 2206	BIO:Biotechnology in Our Soc.	4
MSE 2207	BIO:Organisms in Changing Envr	4
MSE 2208	BIO:Cancer Chronicles	4
MSE 2209	BIO:Challenges in Inf Diseases	4