

PROGRAM CODE ULASBIOMM	COLLEGE OF LIBERAL ARTS AND SCIENCES		
EFFECTIVE DATE FALL 2018	BIOLOGY		
VERSION NUMBER 2188	<i>BACHELOR OF SCIENCE</i>		
MOLECULAR BIOLOGY / MICROBIOLOGY / CELL BIOLOGY			
STUDENT:		STUDENT ID NUMBER:	

MAJOR PROGRAM- at least 5 courses must be 300 or 400 level

Required Biology		
COURSE	CR	GRADE
BIO 104 PRINCIPLES OF BIOLOGY (must earn a C or better)	4	
BIO 106 INTRODUCTION TO ZOOLOGY	4	
BIO 108 INTRODUCTION TO BOTANY	4	
BIO 216 GENETICS	3	
BIO 224 APPLIED ENVIRONMENTAL MICROBIOLOGY	3	
BIO 270 RESEARCH METHODS	3	
BIO 380 SENIOR SEMINAR	2	
TOTAL CREDITS	23	

Molecular Biology/Microbiology/Cellular Biology Track		
COURSE	CR	GRADE
BIO 252 CELL PHYS & METAB. OR CHM 312 BIOCHEMISTRY II	3/4	
BIO 346 MOLECULAR BIOLOGY	3	
BIO 350 CELL BIOLOGY	3	
TOTAL CREDITS	9/10	

Program Electives		
COURSE	CR	GRADE
SELECT TWO COURSES: BIO 122 ANATOMY & PHYS. II OR BIO 235: GENERAL PHYSIO. BIO 232 PLANT PHYSIOLOGY BIO 306 FOOD MICROBIOLOGY BIO 330 HISTOLOGY BIO 334 MEDICAL PARASITOLOGY BIO 336 MEDICAL MICROBIOLOGY BIO 354 DEVELOPMENTAL BIOLOGY BIO 356 IMMUNOLOGY BIO 370 RESEARCH IN BIOLOGY OR BIO 390 INTERNSHIP BIO 460 CANCER BIOLOGY	6/7	
BIOLOGY FIELD ELECTIVE - SELECT ONE COURSE: BIO 218 VERTEBRATE BIOLOGY BIO/ENV222 ENVIRONMENTAL BIOLOGY BIO/MAR 226 MARINE BIOLOGY BIO 230 TAXONOMY OF VASCULAR PLANTS BIO/ENV 244 ECOLOGY BIO 302 ENTOMOLOGY BIO 308 ORNITHOLOGY BIO 314 ANIMAL BEHAVIOR BIO 322 POPULATION AND ECOLOGY OF ANIMALS BIO 324 PLANT ECOLOGY BIO 342 HERPETOLOGY BIO 332 AQUATIC ECOLOGY BIO 358 CONSERVATION BIOLOGY BIOLOGY COURSES OFFERED AT CHINCOTEAGUE FIELD STATION (200 LEVEL OR ABOVE)	3	
BIO 200, 300 OR 400 LEVEL FREE ELECTIVE BIO	3	
TOTAL CREDITS	12	

CONCOMITANT COURSES

Required Chemistry		
COURSE	CR	GRADE
CHM 100 GENERAL CHEMISTRY I	4 ♦	
CHM 102 GENERAL CHEMISTRY II	4	
CHM 214 ORGANIC CHEMISTRY I	4	
CHM 216 ORGANIC CHEMISTRY II	4	
CHM BIOCHEMISTRY I	4	
TOTAL CREDITS	20	


Required Physics		
COURSE	CR	GRADE
PHY 40: GENERAL PHYSICS I AND	4 ♦	
PHY 42: GENERAL PHYSICS II OR	4	
PHY 100: PHYSICS I AND	4 ♦	
PHY 102: PHYSICS II	4	
TOTAL CREDITS	8	

Mathematics		
COURSE	CR	GRADE
SELECT ONE COURSE: MAT 106 TRIGONOMETRY MAT 115 PRECALCULUS MAT 181 CALCULUS I	3/4 ♦	
SELECT ONE COURSE: MAT 140 APPLIED STATISTICS PSY/SOC 200 STATISTICS (PSY 11 OR SOC 10 ARE PREREQ.) MAT 150 BIostatistics MAT181 CALCULUS I MAT 181 CALCULUS II	3/4 ♦	
TOTAL CREDITS	6/8	

Unrestricted Elective Courses <small>ELECTIVE COURSES MAY BE SELECTED FROM ANY DEPARTMENT OR PROGRAM (INCLUDING BIO)</small>		
COURSE	CR	GRADE
TOTAL ELECTIVE CREDITS	6/9	

NO SINGLE COURSE CAN COUNT TOWARD MORE THAN ONE CATEGORY

UP TO THREE (3) CONCOMITANT COURSES MARKED WITH ♦ CAN BE COUNTED TO FULFILL GEN ED GOAL: UNDERSTANDING SCIENCE AND TECHNOLOGY

GRADUATION REQUIREMENTS							
		REQUIRED	✓		REQUIRED	✓	
	GENERAL EDUCATION CREDITS	42-45			COMPREHENSIVE EXAM	PASS	
	PROGRAM CREDITS (MINIMUM)	78-81			MINIMUM QPA OVERALL	2.0	
	TOTAL CREDITS	120			MINIMUM QPA IN MAJOR	2.0	
				MAJOR PROGRAM COURSES 300 OR 400 LEVEL	5		

NAME	
EFFECTIVE DATE FALL 2018 GENERAL EDUCATION VERSION 2188	

KUTZTOWN

UNIVERSITY

DEGREE REQUIREMENTS

GENERAL EDUCATION

Student Learning Outcomes (SLO)

Upon completion of the requirements for the General Education Program, students will be able to:

- 1 communicate clearly and effectively orally and in writing.
- 2 apply scientific and quantitative reasoning to solve problems and increase knowledge.
- 3 apply skills in critical analysis and reasoning for the interpretation of data.
- 4 engage critically with creative or artistic works.
- 5 demonstrate the ability to retrieve, interpret, evaluate, and use information.
- 6 analyze the role of values, ethics, diversity, and multiple perspectives in local and global society.
- 7 demonstrate an understanding of various models for the development of the whole person.
- 8 explore concepts, ideas, and methods from a variety of disciplines.

Use this checklist to plan your degree program. Meet every semester with your academic advisor to be sure that you are taking courses that are required to attain the degree you are seeking. Discuss your goals and choose courses that will help you to attain them. Get the most out of your education by taking advantage of everything that Kutztown University has to offer.

TOTAL GENERAL EDUCATION CREDITS 42-45

FIND A FULL EXPLANATION OF THE GENERAL EDUCATION PROGRAM AT WWW.KUTZTOWN.EDU

First Year Seminar: Discovering College		CREDITS REQUIRED 3	
THESE COURSES MEET SLO 5 & 7		CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
FYS 100	First Year Seminar		
TRANSFER STUDENTS TRANSFERRING 30 CREDITS OR MORE AND NOT TRANSFERRING AN FYS OR FYE COURSE MAY SELECT ANY APPROVED GENERAL EDUCATION COURSE TO MEET THEIR FYS REQUIREMENT.			
TRANSFER ELECTIVE:			

A	Communicating With And About the World	CREDITS REQUIRED 12	
	THESE COURSES MEET SLO 1 & 5	CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
1	COMPOSITION 100 LEVEL CMP 1__		
2	COMPOSITION 200 LEVEL CMP 2__		
3	SPEAKING		
4	ANY WRITING (A2) OR SPEAKING COURSE (A3) OR FROM THE APPROVED LIST		

COURSES IN CATEGORIES B, C & D MUST BE TAKEN OUTSIDE THE STUDENT'S MAJOR. THE MAJOR IS DEFINED AS THE PREFIX THAT IDENTIFIES THE MAJOR. CONCOMITANT REQUIREMENTS MAY BE TAKEN TO MEET GENERAL EDUCATION REQUIREMENTS.

B	Understanding Self & Others	CREDITS REQUIRED 9	
	THESE COURSES MEET SLO 3 & 6	CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
1			
2			
3			

C	Understanding Science & Technology	CREDITS REQUIRED 9-12	
	THESE COURSES MEET SLO 2 & 3	CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
1	SCIENTIFIC INQUIRY		
2	QUANTITATIVE REASONING		
3	ANY COURSE APPROVED FOR C1 OR C2		

D	Understanding & Creating Ideas	CREDITS REQUIRED 9	
	THESE COURSES MEET SLO 4 & 6	CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
1			
2			
3			

B.S. Biology/Molecular/Micro/Cell Biology

Suggested 4-Year Schedule

8/2018

Freshman Year

Fall Semester	Cr
CHM 100 – General Chemistry I (C2)	4
BIO 104 – Principles of Biology	4
First Year Seminar (FYS)	3
Gen Ed Course (A1 = CMP 1XX)	3
Total	14

Spring Semester	Cr
CHM 102 – General Chemistry II	4
BIO 106 – Intro to Zoology	4
Gen Ed Course (B1)	3
Required Math ^{1,2} (C3)	3
Total	14

Sophomore Year

Fall Semester	Cr
CHM 214VL - Org Chem I	4
BIO 108 – Intro to Botany	4
BIO 224 – Applied Env. Microbiology	3
Gen Ed Course (A3 = COM 010)	3
Total	14

Spring Semester	Cr
CHM 216WI - Org Chem II	4
BIO 270CT WI – Research Methods	3
BIO 216 QL - Genetics	3
Required Math ^{1,2}	3
Gen Ed Course (B2)	3
Total	16

Junior Year

Fall Semester	Cr
PHY 40 or 100 (C1)	4
BIO 346 Molecular Biology	3
BIO Elective ³	3
Gen Ed Course (A2 = CMP 2XX)	3
Gen Ed Course (B3)	3
Total	16

Spring Semester	Cr
PHY 42 or 102	4
BIO 350 Cellular Biology	3
BIO Elective ³	3
Gen Ed Course (A4)	3
Gen Ed Course (D1)	3
Total	16

Senior Year

Fall Semester	Cr
CHM 310 Biochemistry I	4
BIO Elective ³	3
Gen Ed Course (D2)	3
Unrestricted Elective	3
Unrestricted Elective	3
Total	16

Spring Semester	Cr
BIO 252 Cell Phys or CHM 312 Biochem II	3/4
BIO 380 - Senior Seminar in Biology	2
BIO Elective ³	3
Gen Ed Course (D3)	3
Unrestricted Elective	3
Total	15/16

¹ See required courses on track sheet. Note: **MAT 105 or Math placement score greater than 60** is a prerequisite for **MAT 106, MAT 140, and MAT 150**.

² Prerequisites of MAT 017 or higher **and** PSY 11 Intro to Psychology are required for PSY 200 (Statistics for the Social and Behavioral Sciences).

³ See Biology electives on track sheet.

Note: No single course can count toward more than one category. At least five BIO courses must be at 300-400 level.