

<b>PROGRAM CODE</b> ULASMARBI	<b>COLLEGE OF LIBERAL ARTS AND SCIENCES</b>		
<b>EFFECTIVE DATE</b> FALL 2018	<b>MARINE SCIENCE</b>		
<b>VERSION NUMBER</b> 2188	<i>BACHELOR OF SCIENCE</i>		
<b>BIOLOGY TRACK</b>			
<b>STUDENT:</b>		<b>STUDENT ID NUMBER:</b>	

*MAJOR PROGRAM*

<b>Required Marine Science</b> (Notes 1-3)		
COURSE	CR	GRADE
MAR 110: INTRO. TO OCEANOGRAPHY	3	
MAR 226: MARINE BIOLOGY	3	
INTENSIVE FIELD METHODS COURSE (NOTE 2)	3	
MAR 210: SOPHOMORE SEMINAR	1	
MAR 364: PHYSICAL OCEANOGRAPHY	3	
MAR 366: MARINE GEOLOGY	3	
MAR 370: RESEARCH IN MARINE SCIENCE <b>OR</b> MAR 390: INTERNSHIP IN MARINE SCIENCE	3	
MAR 380: SENIOR SEMINAR	2	
SCIENCE ELECTIVE (NOTES 1, 3)	3	
SCIENCE ELECTIVE (NOTES 1, 3)	3	
<b>TOTAL CREDITS</b>	<b>27</b>	

<b>Required Biology</b> (Notes 1, 2)		
COURSE	CR	GRADE
BIO 224: APPLIED ENVIRON. MICRO	3	
BIO / MAR ORGANISM COURSE 200 LEVEL OR ABOVE, SUCH AS BIO / MAR 342: ICHTHYOLOGY, MAR 260: MARINE INVERTEBRATES	3	
BIO / MAR ECOLOGY COURSE 200 LEVEL OR ABOVE, SUCH AS BIO / MAR: 326 MARINE ECOL OR BIO / MAR 320: PHYSIO. ECOLOGY	3	
BIO PHYSIOLOGY COURSE 200 LEVEL OR ABOVE, SUCH AS BIO 300: COMP. ANIMAL PHYSIOLOGY OR BIO / MAR 320: PHYSIOLOGICAL ECOLOGY	3	
BIO 108: BOTANY <b>OR</b> BIO ELECTIVE 200 LEVEL OR ABOVE	3	
<b>TOTAL CREDITS</b>	<b>15-16</b>	

NOTE:

\*\* COURSES REQUIRED FOR THE MAJOR, BUT MAY BE USED TO SATISFY GENERAL EDUCATION REQUIREMENT UNDERSTANDING SCIENCE AND TECHNOLOGY

1. COURSES IN THIS CATEGORY MAY BE USED TO SATISFY THE MINIMUM OF 9 CREDITS THAT MUST BE TAKEN AT THE CHINCOTEAGUE BAY FIELD STATION, WALLOPS ISLAND, VA. HOWEVER, STUDENTS ARE ENCOURAGED TO TAKE MORE COURSES AT THE CBFS TO FULFILL THE ELECTIVES IN THIS PROGRAM.

2. METHODS COURSES ARE OFFERED AT THE CBFS AND MUST BE APPROVED BY THE MARINE SCIENCE PROGRAM COORDINATOR.

3. PHYSICAL SCIENCE OR BIOLOGY COURSE AT 200 LEVEL OR ABOVE.

4. PSY 11 IS A PREREQUISITE FOR PSY 200.

*CONCOMITANT COURSES*

<b>Biology</b>		
COURSE	CR	GRADE
BIO 104: PRINCIPLES OF BIOLOGY	4	
BIO 106: INTRO TO ZOOLOGY	4	

<b>Chemistry</b>		
COURSE	CR	GRADE
CHM 100: GENERAL CHEMISTRY I	**	
CHM 102: GENERAL CHEMISTRY II	4	
CHM 214: ORGANIC CHEMISTRY I	4	
CHM 216: ORGANIC CHEM. II <b>OR</b> CHM 220: ENVIRONMENTAL ANALYSIS	3-4	

<b>Geography</b>		
COURSE	CR	GRADE
GEG 204: METEOROLOGY <b>OR</b> GEG 274: GEO. INFO. SYS. I <b>OR</b> GEG 347 REMOTE SENSING	3	


<b>Geology</b>		
COURSE	CR	GRADE
GEL 100: PHYSICAL GEOLOGY	**	

<b>Mathematics</b>		
COURSE	CR	GRADE
MAT 140: APPLIED STATISTICS <b>OR</b> PSY 200: STATS. SOC. & BEHAV. SCI (NOTE 4)	3	

<b>Physics</b> THESE PHYSICS COURSES HAVE MATH PREREQUISITES		
COURSE	CR	GRADE
PHY 40 OR PHY 100	**	
PHY 42 OR PHY 102	4	
<b>TOTAL CREDITS</b>	<b>29/30</b>	

<b>Free Electives</b> ANY COURSE CARRYING UNIVERSITY CREDIT		
COURSE	CR	GRADE
<b>TOTAL CREDITS</b>	<b>2-4</b>	

**GRADUATION REQUIREMENTS**

		<b>REQUIRED</b>	<input checked="" type="checkbox"/>		<b>REQUIRED</b>	<input checked="" type="checkbox"/>
	GENERAL EDUCATION CREDITS	<b>42-45</b>		COMPREHENSIVE EXAM	<b>PASS</b>	
	PROGRAM CREDITS (MINIMUM)	<b>71-72</b>		MINIMUM QPA OVERALL	<b>2.0</b>	
	ELECTIVES	<b>2-4</b>		MINIMUM QPA IN MAJOR	<b>2.0</b>	
	TOTAL CREDITS	<b>120</b>				

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 checksheet 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.*

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**TOTAL GENERAL EDUCATION CREDITS 42-45**

FIND A FULL EXPLANATION OF THE GENERAL EDUCATION PROGRAM AT [WWW.KUTZTOWN.EDU](http://WWW.KUTZTOWN.EDU)

<b>First Year Seminar: Discovering College</b>		CREDITS REQUIRED <b>3</b>	
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	<b>Communicating With And About the World</b>	CREDITS REQUIRED <b>12</b>	
	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	<b>Understanding Self &amp; Others</b>	CREDITS REQUIRED <b>9</b>	
	THESE COURSES MEET SLO 3 & 6	CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
1			
2			
3			

C	<b>Understanding Science &amp; Technology</b>	CREDITS REQUIRED <b>9-12</b>	
	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	<b>Understanding &amp; Creating Ideas</b>	CREDITS REQUIRED <b>9</b>	
	THESE COURSES MEET SLO 4 & 6	CREDITS EARNED:	
COURSE NUMBER	COURSE NAME	GR	CR
1			
2			
3			

**COURSE SEQUENCING WITHIN THE MARINE SCIENCE MAJOR  
Biology Track**

FRESHMAN		Summer	SOPHOMORE		Summer	JUNIOR		Summer	SENIOR	
FALL	SPRING		FALL	SPRING		FALL	SPRING		FALL	SPRING
BIO 104 Principles of Biology	BIO 106 Introduction to Zoology		BIO 224 Environmental Microbiology	BIO 226 Marine Biology		BIO 326 Marine Ecology or BIO 320 Physiology Ecology	MAR 364 Physical Oceanography or MAR 366 Marine Geology		BIO 326 Marine Ecology or BIO 320 Physiology Ecology	MAR 364 Physical Oceanography or MAR 366 Marine Geology
MAR 110 Intro to Oceanography	C3 GEL 100 Physical Geology	MAR 237 Field Methods in Oceanography	C2 CHM 100 General Chemistry I	CHM 102 General Chemistry II	MAR/BIO Elective	CHM 214 Organic Chemistry I	CHM 216 Organic Chemistry II	MAR 370 or MAR 390?	BIO Elective	Science Elective
FYS 100 First Year Seminar	A1 CMP 100		MAT 140 or PSY 200 (statistics)	GIS 274 Intro to GIS*	MAR/IO Elective	BIO organism course	Science Elective		MAR 370 Research or 390 Internship	MAR 380 Senior Seminar
Math	B1 PSY 11		C1 GEG 10	D		C2 PHY 040 or 100	PHY 042 or 102		B3	D
			MAR 210 Sophomore Seminar	A2 CMP 200		A3 COM 10	B2 HEA 102		D	A4
14 cr	14 cr	3 cr	14 cr	16 cr	6 cr	17 cr	17 cr	3 cr	15 cr	14 cr

3x 3 credit  
summer courses  
at CBFS

\*Requires GEG 10