

PROGRAM CODE ULASPHYET	COLLEGE OF LIBERAL ARTS AND SCIENCES		
EFFECTIVE DATE FALL 2020	PHYSICS		
VERSION NUMBER 2208	<i>BACHELOR OF SCIENCE</i>		
ENGINEERING TECHNOLOGY TRACK			
STUDENT:		STUDENT ID NUMBER:	

MAJOR PROGRAM

Common Core		
COURSE	CR	GRADE
PHY 100: PHYSICS I	4	
PHY 102: PHYSICS II	4	
PHY 212: MODERN PHYSICS	3	
PHY 220: ELECTRONICS	3	
PHY 230: OPTICS	3	
PHY 315: ADVANCED LAB	2	
PHY 380: SENIOR SEMINAR	2	
TOTAL CREDITS	21	

Engineering Technology Track (Required)		
COURSE	CR	GRADE
EGR 121: ENGINEERING DRAWING AND DESIGN	3	
EGR 130: ENGINEERING MECHANICS	3	
EGR 230: STRENGTH OF MATERIALS	3	
PHY 80: PROBLEM SOLVING TECHNIQUES	3	
PHY 250: PROGRAMMING FOR EXP. RESEARCH & INDUSTRY	3	
PHY 290: INTRO. TO NANOTECHNOLOGY	3	
PHY 340: COMPUTATIONAL PHYSICS	3	
PHY 350: INSTRUMENTATION IN PHYSICS	3	
TOTAL CREDITS	24	

Engineering Technology Track (Electives)		
STUDENTS MUST DISCUSS WITH THEIR ADVISORS WHICH ELECTIVES WOULD BEST SERVE THEIR FUTURE CAREER GOALS BEFORE CHOOSING THEM.		
CHOOSE AT LEAST ONE (5 CREDITS)	CR	GRADE
EGR 370: RESEARCH IN ENGINEERING	1-5	
EGR 390: INTERNSHIP IN ENGINEERING	1-5	
TOTAL CREDITS	5	

CONCOMITANT COURSES

Chemistry		
COURSE	CR	GRADE
CHM 100: GENERAL CHEMISTRY I	*	
CHM 102: GENERAL CHEMISTRY II	4	


Mathematics		
COURSE	CR	GRADE
MAT 122: APPLIED CALCULUS OR MAT 181: CALCULUS I	*	
MAT 140: APPLIED STATISTICAL METHODS	3	
MAT 361: OPERATIONS RESEARCH I	3	

Biology		
COURSE	CR	GRADE
BIO 104: PRINCIPLES OF BIOLOGY	*	
TOTAL CREDITS	10	

Free Electives <i>CHOOSE ANY COURSES THAT COUNT TOWARD GRADUATION</i>		
COURSE	CR	GRADE
	3	
	3	
	3	
	3	
TOTAL CREDITS	15	

NOTE:

* REQUIRED FOR THE MAJOR. SATISFIES GENERAL EDUCATION REQUIREMENT OF UNDERSTANDING SCIENCE AND TECHNOLOGY

GRADUATION REQUIREMENTS							
		REQUIRED	✓		REQUIRED	✓	
	GENERAL EDUCATION CREDITS	42-45			COMPREHENSIVE EXAM	PASS	
	PROGRAM CREDITS (MINIMUM)	60			MINIMUM QPA OVERALL	2.0	
	FREE ELECTIVE CREDITS	15			MINIMUM QPA IN MAJOR	2.0	
	TOTAL CREDITS	120					

NAME	EFFECTIVE DATE AUGUST 27, 2018
ID NUMBER	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.

Completion of the KU General Education program will give students opportunities to:

- 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 obtain 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
THIS COURSE MEETS SLO 5 & 7		CREDITS EARNED:

COURSE NUMBER	COURSE NAME	CR	GR
FYS 100	First Year Seminar		

TRANSFER STUDENTS TRANSFERRING 15 CREDITS OR MORE AND NOT TRANSFERRING AN FYS OR FYE COURSE MAY SELECT ANY ADDITIONAL COURSE FROM SECTIONS A, B, C, OR D 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	CR	GR
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	CR	GR
1			
2			
3			

C	Understanding Science & Technology	CREDITS REQUIRED	9-12
THESE COURSES MEET SLO 2 & 3		CREDITS EARNED:	

COURSE NUMBER	COURSE NAME	CR	GR
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	CR	GR
1			
2			
3			

B.S. Physics (Engineering Technology Track)

(This document should *not* be considered as a substitute for the official program check sheet or a comprehensive discussion with your advisor. Also please refer to the program check sheet for all the footnotes, other guidelines, and requirements.)

First Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 100/40	Physics I	4	PHY 102/42	Physics II	4
PHY 80	Problem Solving Techniques	3	MAT 122/181	Applied Calculus or Calculus I	3/4
CHM 100	General Chemistry I	4	CHM 102	General Chemistry II	4
FYS 100	<i>First Year Seminar</i>	3		<i>Gen. Ed. or Elective</i>	3
14			14/15		

Second Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
EGR 121	Engineering Drawing	3	PHY 230	Optics	3
EGR 130	Engineering Mechanics	3	MAT 140	Applied Stats	3
PHY 220	Electronics	3	EGR 230	Strength of Materials	3
	<i>Gen. Ed. or Elective</i>	3		<i>Gen. Ed. or Elective</i>	3
	<i>Gen. Ed. or Elective</i>	3		<i>Gen. Ed. or Elective</i>	3
15			15		

Third Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 212	Modern Physics	3	PHY 290	Intro to Nanotech	3
PHY 250	Programming for Exp. Research	3	PHY 350	Instrumentation in Physics	3
MAT 361	Operations Research I	3		<i>Gen. Ed. or Elective</i>	3
	<i>Gen. Ed. or Elective</i>	3		<i>Gen. Ed. or Elective</i>	3
	<i>Gen. Ed. or Elective</i>	3		<i>Gen. Ed. or Elective</i>	3
15			15		

Fourth Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 340	Computational Physics	3	PHY 315	Advanced Lab	2
PHY 380	Senior Seminar	2	BIO 104	Principles of Biology	4
	Research or Internship	2/3		Research or Internship	3/2
	<i>Gen. Ed. or Elective</i>	3		<i>Gen. Ed. or Elective</i>	3
	<i>Gen. Ed. or Elective</i>	3		<i>Gen. Ed. or Elective</i>	3
	<i>Gen. Ed. or Elective</i>	3			15/14
16/17					

Gen. Ed. and Free Electives

A1	
A2	
A3	
A4	
B1	
B2	
B3	
D1	
D2	
D3	
Free Elective	
Free Elective	
Free Elective	
Free Elective	
Free Elective	