

BACHELOR OF SCIENCE

PHYSICS EDUCATION *Teacher Licensure Program*

The general philosophy of the Department is that each student should be able to reason, to collect facts and opinions, to think critically and to make informed decisions concerning their physical, social, economic, and political environment. The objective of the Bachelor of Science in Physics program is to prepare students for careers in physics research, engineering, medicine, and other professional fields including physics teaching in high schools. Physics courses prepare students with good mathematical and analytical skills. In every skilled profession, such as engineering, medicine, management, teaching, etc., analytical expertise gained through mathematics and physics courses will provide an added opportunity/tool to choose and succeed in that profession. A thorough study of mechanics, statistical physics, modern physics, electromagnetic theory, and quantum mechanics along with introductory physics courses and introductory math courses enhances students' ability and updates modern technological innovations needed to succeed in a variety of career choices.

Alternative physics careers also include teaching, medicine, law (especially intellectual property or patent law), science writing, history of science, philosophy of science, science policy, energy policy, government, or management in technical fields.

*College of
Science,
Engineering
and
Technology*



**COLLEGE OF SCIENCE, ENGINEERING AND
TECHNOLOGY**
PHYSICS EDUCATION
CONCENTRATION: (Teacher Licensure Program)

Students must choose six (6) hours of physics electives from the course list below:

Physics Elective Options:		
COURSE	COURSE TITLE	CREDIT HOURS
ITEM, ITHM & MATH options	Any ITEM, ITHM, and MATH course above 244	3
ITEM 301	Principles of Emergency Management	3
ITEM 303	Community Emergency Response Team	3
ITEM 401	Application of Emergency Management Computer Technology	3
ITEM 403	Disaster Management	3
ITHM 300	Principle of Hazardous Material Management	3
ITHM 402	Industrial Hygiene	3
ITHM 405	Risk Assessment	3
ITMA 410	First-Line Supervision and Foremanship	3
CSC 118	Computer Science I	3
CSC 119	Computer Science II	3
CSC 215	Data Analytics	3
CSC 225	Discrete Structures for Computer Science	3
CSC 228	Data Structures and Algorithms.	3
CSC 235	Security Awareness	3
CSC 245	Introduction to Bioinformatics	3
CSC 330	Database Systems	3



Degree Map: Catalog 2022-2023

Student Name: _____

J-Number: _____

Advisor: _____

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY
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Entering Term: _____

Expected Graduation Date: _____

Pathway: _____

FRESHMAN YEAR FALL 1ST SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
UNIV 100	University Success	2	UR		
ENG 104	Composition I	3	GEC		
MATH 241	Calculus I & Lab	3	GEC		
BIO 111 & BIOL 111	General Biology & Lab	4	GEC		
PHY 198	Physics	0.5	DPR		
	Humanities & Fine Arts Option	3	GEC		
TOTAL CREDIT HOURS		15.5	TERM GPA:		

Comments:

FRESHMAN YEAR SPRING 2ND SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
ENG 105	Composition II	3	GEC		
PHY 211 & PHY 211	General Physics I & Lab	4	DPR		
PHY 199	Physics Seminar	0.5	DPR		
MATH 242	Calculus II & Lab	3	DPR		
	Humanities & Fine Arts Option	3	GEC		
	Pathway Option	3	PATH		
TOTAL CREDIT HOURS		16.5	TERM GPA:		

ACT/SAT SCORE _____ PRAXIS CORE _____ READING (5712) _____ WRITING(5722) _____ Math(5732) _____

Comments:

SOPHOMORE YEAR FALL 1ST SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
EDCI 100	Introduction to Education	3	DPR		
SS 203	Historical and Cultural Foundation	3	DPR		
CHEM 141 & CHML 141	General Chemistry I & Lab	4	GEC		
PHY 212 & PHY 212	General Physics II & Lab	4	DPR		
PHY 298	Physics Seminar	0.5	DPR		
	Pathway Option	3	PATH		
TOTAL CREDIT HOURS		17.5	TERM GPA:		

Comments:

SOPHOMORE YEAR SPRING 2ND SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
SPED 311	Exceptional Child & Youth in School	3	DPR		
EETC 336/CSC 118	Adv. Multimedia in the Classroom or Programming Fundamentals	3	DPR		
UNIV 200	Civic Engagement	1	UR		
CHEM 142 & CHML 142	General Chemistry II & Lab	4	DPR		
PHY 299	Physics Seminar	0.5	DPR		
	Humanities & Fine Arts Option	3	GEC		
	Pathway Option	3	PATH		
TOTAL CREDIT HOURS		17.5	TERM GPA:		

Admission to Teacher Education _____ Comments:

JUNIOR YEAR FALL 1ST SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
EDCI 301	Classroom Management & Learning Environments	3	DPR		
ETEC 367	Intro to Assessment, Measurement & Evaluation	3	DPR		
PHY 311	Theoretical Mechanics	3	DPR		
PHY 351	Thermal & Statistical Physics	3	DPR		
PHY 398	Physics Seminar	0.5	DPR		
	Social & Behavioral Science Option	3	GEC		
TOTAL CREDIT HOURS		15.5	TERM GPA:		
PRAXIS II Content _____ PRAXIS PLT Grades 7-12 _____					
Comments:					
JUNIOR YEAR SPRING 2ND SEMESTER (Register for PRAXIS II Exams: PLT, CIA & FOUNDATIONS OF READING)					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
RE 310	Teaching Reading in Content Areas	3	DPR		
PHY 380	Independent Study	1	DPR		
PHY 330w	Methods of Experimental Physics	3	DPR		
SS 301	Inquiry-Based Instruction in Geography and Civics Education	3	DPR		
PHY 399	Physics Seminar	0.5	DPR		
	Physics Elective	3	DPE		
TOTAL CREDIT HOURS		13.5	TERM GPA:		
PRAXIS CIA K-6(5017) _____ Comments:					
Faculty Advisor Signature _____			Student Signature _____		
RC=Restricted courses that require admission to Teacher Education					

Clinical I SENIOR YEAR FALL 1ST SEMESTER					
Content Area Methods Course should be taken in conjunction with EDCI 401. A 40-60 hour clinical placement/experience will be coordinated by EDCI 401 instructor.					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
EDCI 401 (RC)	Unit Planning, Assessment & Classroom Management	3	DPR		
COUN 315	Human Development or Social & Behavioral Science Option	3	GEC		
PHY 361	Math Methods in Physics Teachers	3	DPR		
PHY 498	Physics Seminar	0.5	DPR		
	Physics Elective	3	DPE		
TOTAL CREDIT HOURS		12.5	TERM GPA:		
Admission to Student Teaching _____ Comments:					
SENIOR YEAR SPRING 2ND SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
EDCI 402 (RC)	Clinical Internship in Student Teaching	12	DPR		
PHY 499	Physic Seminar	0.5	DPR		
TOTAL CREDIT HOURS		12.5	TERM GPA:		
Comments:					

TOTAL HOURS: 121 (REQUIRED)

*Candidates that transfer 12 or more hours of college credit are exempt from UNIV 100: University Success: however, the student must take 2 hours of general electives to replace the UNIV course.

Student Signature: _____

Advisor Signature: _____