

PHYSICS EDUCATION (B.S.ED.)

Requirements for the Major

To receive the BS or BS Ed degree, a student must maintain an overall GPA of at least 2.0 and at least 2.5 in all core science, technology, engineering, and math courses. The total number of hours of coursework for the BS or BS Ed is at least 124 semester hours. In addition, to receive the BS Ed degree a student must be admitted to the Teacher Education Program, which is sought through the College of Education and Human Development. Students interested in entering teacher education should see the Requirements for Admission to Teacher Education in this issue of the Jackson State University Undergraduate Catalog under the College of Education and Human Development.

Major Requirements

Code	Title	Hours
PHY 198	PHYSICS STUDENT SEMINAR	0.5
PHY 199	PHYSICS STUDENT SEMINAR	0.5
PHY 298	PHYSICS STUDENT SEMINAR	0.5
PHY 299	PHYSICS STUDENT SEMINAR	0.5
PHY 398	PHYSICS STUDENT SEMINAR	0.5
PHY 399	PHYSICS STUDENT SEMINAR	0.5
PHY 498	PHYSICS STUDENT SEMINAR	0.5
PHY 499	PHYSICS STUDENT SEMINAR	0.5
PHY 211 & PHYL 211	General Physics I and GENERAL PHYSICS LAB I	4
PHY 212 & PHYL 211	General Physics II and GENERAL PHYSICS LAB I	4
PHY 216	MODERN PHYSICS	3
PHY 311	THEORETICAL MECHANICS I	3
PHY 330	METHODS OF EXPERIMENTAL PHYICS	3
PHY 342	OPTICS SPECTRA & LASERS	3
PHY 351	THERMAL PHYSICS	3
PHY 361	MATH MET OF PHYSICS & CHEMISTRY	3
PHY 411	ELECTROMAGNETIC THEORY I	3
PHY 422	QUANTUM MECHANICS	3
PHY 431	ATOMIC & NUCLEAR PHYSICS	3
CHEM 142 & CHML 142	GENERAL CHEMISTRY II and GENERAL CHEMISTRY II LAB	4
MATH 242	CALCULUS II WITH LABORATORY	3
Total Hours		46

Code	Title	Hours
EDCI 100	INTRODUCTION TO EDUCATION	3
SS 203	HISTORICAL&CULTURAL FOUNDATNS	3
SPED 311	EXCEP CHILD & YOUTH IN THE SCHO	3
ETEC 336	ADV MULTIMEDIA IN CLASSROOM	3
EDCI 301	CLASSROOM MANAGEMENT AND EFFECTIVE LEARNING ENVIRONMENTS	3
ETEC 367	INTRO TO ASSMNT MSRMT & EVALTN	3
RE 310	TCHNG READING IN CONTENT AREAS	3
SS 301	INQRY-BASED INSTRN N GEOG & CE	3

COUN 315	Human Growth and Development	3
EDCI 401	Unit Planning, Assessment, and Classroom Management	3
EDCI 402	CLINICAL INTERNSHIP IN STD TCH	12
Physics Elective		3
Total Hours		45

Course	Title	Hours
Freshman		
Fall		
BIO 111 & BIOL 111	GENERAL BIOLOGY and GENERAL BIOLOGY LAB	4
ENG 104 or ENG 103 or ENG 111	COMPOSITION I or English Composition I with Co-requisite Support or COMPOSITION & LITERATURE FOR L	3
MATH 241	CALCULUS I WITH LABORATORY	3
PHY 198	PHYSICS STUDENT SEMINAR	0.5
UNIV 100	UNIVERSITY SUCCESS	2
Humanities & Fine Arts Option		3
	Hours	15.5

Spring		
ENG 105 or ENG 112	COMPOSITION II or COMPOSITION	3
MATH 242	CALCULUS II WITH LABORATORY	3
PHY 199	PHYSICS STUDENT SEMINAR	0.5
PHY 211 & PHYL 211	General Physics I and GENERAL PHYSICS LAB I	4
Humanities & Fine Arts Option		3
Pathway Option		3
	Hours	16.5

Sophomore		
Fall		
CHEM 141 & CHML 141	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB	4
EDCI 100	INTRODUCTION TO EDUCATION	3
PHY 212 & PHYL 212	General Physics II and GENERAL PHYSICS LAB II	4
PHY 298	PHYSICS STUDENT SEMINAR	0.5
SS 203	HISTORICAL&CULTURAL FOUNDATNS	3
Pathway Option		3
	Hours	17.5

Spring		
CHEM 142 & CHML 142	GENERAL CHEMISTRY II and GENERAL CHEMISTRY II LAB	4
ETEC 336 or CSC 118	ADV MULTIMEDIA IN CLASSROOM or COMPUTER SCIENCE I	3
PHY 299	PHYSICS STUDENT SEMINAR	0.5
SPED 311	EXCEP CHILD & YOUTH IN THE SCHO	3
UNIV 200	CIVIC ENGAGEMENT	1
Humanities & Fine Arts Option		3
Pathway Option		3
	Hours	17.5

Junior		
Fall		
EDCI 301	CLASSROOM MANAGEMENT AND EFFECTIVE LEARNING ENVIRONMENTS	3
ETEC 367	INTRO TO ASSMNT MSRMT & EVALTN	3
PHY 311	THEORETICAL MECHANICS I	3
PHY 351	THERMAL PHYSICS	3
PHY 398	PHYSICS STUDENT SEMINAR	0.5
Social & Behavioral Science Option		3
	Hours	15.5

Spring		
PHY 330	METHODS OF EXPERIMENTAL PHYSICS	3
PHY 380	INDEPENDENT STUDY	1
PHY 399	PHYSICS STUDENT SEMINAR	0.5
RE 310	TCHNG READING IN CONTENT AREAS	3
SS 301	INQRY-BASED INSTRN N GEOG & CE	3
Physics Elective		3
Hours		13.5
Senior		
Fall		
COUN 315	Human Growth and Development	3
EDCI 401	Unit Planning, Assessment, and Classroom Management	3
PHY 361	MATH MET OF PHYSICS & CHEMISTRY	3
PHY 498	PHYSICS STUDENT SEMINAR	0.5
Physics Elective		3
Hours		12.5
Spring		
EDCI 402	CLINICAL INTERNSHIP IN STD TCH	12
PHY 499	PHYSICS STUDENT SEMINAR	0.5
Hours		12.5
Total Hours		121

Notes:

- 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.
- Online Graduation Clearance (**to be completed during the graduating semester only**).

Code	Title	Hours
<i>Physics Elective Options</i>		
Students must chose six (6) hours of Physics Electives from the course list below.		
Any ITEM, ITHM, and MATH course above 244		3
ITEM 301	PRINCIPLES OF EMERGENCY MNGT	3
ITEM 303	COMMUNITY EMERGNCY RESPN TEAM	3
ITEM 401	APP OF EMRGNCY MNGT CMPTR TEC	3
ITHM 300	PRIN OF HAZARDOUS MATERLS MNGT	3
ITHM 402	INDUSTRIAL HYGIENE	3
ITMA 410	1ST LINE SUPRVSN & FRMAN	3
CSC 118	COMPUTER SCIENCE I	3
CSC 119	COMPUTER SCIENCE II	3
CSC 215	DATA ANALYTICS	3
CSC 228	DATA STRUCTURES & ALGORITHMS	3
CSC 235	SECURITY AWARENESS	3
CSC 245	INTRODUCTION TO BIOINFORMATICS	3
CSC 330	DATABASE SYSTEMS	3

Student Learning Outcomes**Student Learning Outcome 1**

Students completing a BS degree in Physics will apply mathematics and science knowledge to solve problems that require critical and analytical thinking.

Student Learning Outcome 2

Students completing a BS degree in CPAS will have a broad knowledge of global perspectives as they relate to their field of study and obtain experimental learning within the international scientific community.

Student Learning Outcome 3

Students completing a BS degree in CPAS will be prepared to enter the workforce in their field and/or engage in advanced studies and research in their fields.