

**NEW
CURRICULUM GUIDE
BACHELOR OF SCIENCE IN PHYSICS: ENGINEERING PHYSICS CONCENTRATION**

FRESHMAN YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
FRST 100 University Experience II (SS)	1	PHYS 241 General Physics I (SR)	3
PHYS 101 Introduction to Astronomy (SR)	3	PHYS 251 General Physics I Laboratory (SR)	1
GEEN 160 Computer Programming in C++	2	MATH 132 Calculus II (MLAR)	4
MATH 131 Calculus I (MLAR)	4	ENGL 101 Ideas & Their Expressions II (WC)	3
ENGL 100 Ideas & Their Expressions I (WC)	3	Humanities/Fine Arts Elective II ¹ (HFA)	<u>3</u>
Humanities/Fine Arts Elective I ¹ (HFA)	<u>3</u>		14
	16		

SOPHOMORE YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PHYS 242 General Physics II	3	PHYS 405 Mathematical Physics	3
PHYS 252 General Physics II Laboratory	1	PHYS 406 Intro. to Modern Physics	3
MATH 231 Calculus III (MLAR)	4	CHEM 106 General Chemistry VI	3
Social/Behavioral Sciences Elective I ¹ (SBS)	3	CHEM 116 General Chemistry VI Laboratory	1
Elective Free Elective ⁵	3	PHYS 445 Intro. to Computations in Physics	3
Engineering Elective ⁴	<u>3</u>	Social/Behavioral Sciences Elective II ¹ (SBS)	<u>3</u>
	17		16

JUNIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PHYS 400 Physical Mechanics I	3	PHYS 401 Physical Mechanics II	3
PHYS 415 Electromagnetism I	3	PHYS 407 Intermediate Physics Lab	2
PHYS 4XX ² Physics Elective	3	PHYS 416 Electromagnetism II	3
MATH 431 Intro. to Diff. Equations	3	MATH 432 Intro. To Applied Mathematics	3
FRST 101 University Experience II (SS)	1	Engineering Elective ⁴	3
Engineering Elective ⁴	<u>3</u>	Elective Free Elective ⁵	<u>3</u>
	16		17

SENIOR YEAR

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
PHYS 420 Quantum Physics I	3	PHYS 422 Quantum Physics II	3
PHYS 430 Thermo. & Stat. Mech.	3	PHYS 4XX ² Physics Elective	3
PHYS 520 Advanced Laboratory	2	Engineering Elective ⁴	3
Engineering Elective ⁴	3	Engineering Elective ⁴	3
Engineering Elective ⁴	3	Engineering Elective ⁴	2
PHYS 550 ³ Undergraduate Research	<u>3</u>	PHYS 510 Physics Seminar	<u>1</u>
	17		15

TOTAL CREDIT HOURS: 128

¹Of the 12 total credit hours taken in the Social/Behavioral Sciences and Humanities/Fine Arts, 3 credit hours must be completed in African-American Studies and 3 credit hours must be completed in Global Studies.

²Physics electives (6 hours) numbered 400 or above.

³PHYS 550 – capstone course

⁴Students under guidance of a faculty advisor can choose any discipline in Engineering (24 hours).

⁵Free electives (6 hours) – It is suggested that these hours be FOLA courses.