Parks College of Engineering, Aviation, and Technology
Department of Physics
Bachelor of Science Curriculum
Preprofessional Health Studies Option

Freshman Year:

Semester 1:	**CR**	***Semester 2:***	**CR**
PHYS 1110 Introduction to Physics	1	PHYS 1610 Engineering Physics I	3
CHEM 1110/1115 General Chemistry I/Lab	4	PHYS 1620 Engineering Physics I Laboratory	1
ENGL 1900 or 1920 Adv. Strategies of Rhetoric & Research or Adv. Writing for Professionals	3	MATH 1520 Calculus II	4
MATH 1510 Calculus I	4	CHEM 1120/1125 General Chemistry II/Lab	4
BIOL 1240/1245 Principles of Biology/Lab	3	BIOL 1260/1265 Principles of Biology II/Lab	4
Total Credit Hours	**15**	**Total Credit Hours**	**16**

Sophomore Year:

Semester 1:	**CR**	***Semester 2:***	**CR**
PHYS 1630/1640 Engineering Physics II/Lab	4	PHYS 2610/2620 Modern Physics/Lab	4
MATH 2530 Calculus III	4	PHYS 3110 Classical Mechanics	3
SOC 1100 Introduction to Sociology	1	MATH 3550 Differential Equations	3
BIOL 3020 Biochemistry & Molecular Biology	3	CSCI 1060 Intro. to CS: Scientific Programming	3
PSY 1010 General Psychology	3	BIOL 3040/3060 Cell Structure & Function/Lab	4
Total Credit Hours	**16**	**Total Credit Hours**	**17**

Junior Year:

Semester 1:	**CR**	***Semester 2:***	**CR**
CHEM 2410 Principles of Organic Chem. I	3	PHYS 4210 Electricity & Magnetism I	3
CHEM 2415 Principles of Organic Chem. I Lab	1	PHYS 3410 Thermodynamics & Statistical Mech.	3
PHYS 4610 Quantum Mechanics	3	PHYS 3860 Physics Research I	0
MATH 3270 Adv. Mathematics for Engineers	3	MATH 3240 Numerical Analysis	3
PHYS 3610 Modern Physics II	3	CHEM 2420/2425 Prin. of Organic Chem. II/Lab	4
ENGL Upper Level Course (Writing intensive)	3	Cultural Diversity Elective	3
Total Credit Hours	**16**	**Total Credit Hours**	**16**

Senior Year:

Semester 1:	**CR**	***Semester 2:***	**CR**
PHYS 3510 Analog & Digital Electronics/Lab	4	PHYS 4880 Physics Research III	3
PHYS Upper Level Course	3	PHYS Upper Level Course	3
PHYS 4870 Physics Research II	0	Open Elective	3
PHIL 2050 Ethics	3	PHYS 3310 Optics	3
CMM 2200 Small Group Presentation	1	PHYS 3320 Optics Laboratory	1
MATH 3850 Foundations of Statistics	3	THEO 1000 Theological Foundations	3
Total Credit Hours	**14**	**Total Credit Hours**	**17**

Total Credit Hours: 127

Prerequisites:

CHEM 1110/1115 General Chemistry I/Lab __
CSCI 1060 Intro. to CS: Scientific Programming __
PHYS 1110 Introduction to Physics __
PHYS 1610/1620 Engineering Physics I/Lab __
PHYS 1630/1640 Engineering Physics II/Lab __

Knowledge of Differential & Integral Calculus:

MATH 1510 Calculus I __
MATH 1520 Calculus II __
MATH 2530 Calculus III __

Required Courses:

MATH 3550 Differential Equations I __
MATH 3270 Advanced Mathematics for Engineers __
MATH 3240 Numerical Analysis __
MATH 3850 Foundations of Statistics __
PHYS 2610/2620 Modern Physics/lab __
PHYS 3110 Classical Mechanics __
PHYS 3310/3320 Optics/Lab __
PHYS 3410 Thermodynamics & Statistical Mechanics __
PHYS 3510 Analog & Digital Electronics/Lab __
PHYS 3610 Modern Physics II __
PHYS 4210 Electricity & Magnetism I __
PHYS 4610 Quantum Mechanics __

Two additional courses selected from:

PHYS 3120 Advanced Classical Mechanics __
PHYS 4220 Electricity & Magnetism II __
PHYS 4620 Application of Quantum Mechanics __

Additional Requirements for Preprofessional Health Studies:

BIOL 1240/1245 Principles of Biology/Lab __
BIOL 1260/1265 Principles of Biology II/Lab __
BIOL 3020 Biochemistry & Molecular Biology __
BIOL 3040/3060 Cell Structure & Function/Lab __
CHEM 1120/1125 General Chemistry II/Lab __
CHEM 2410/2415 Principles of Organic Chemistry I/Lab __
CHEM 2420/2425 Principles of Organic Chemistry II/Lab __

Research Experience:

PHYS 3860 Physics Research I __
PHYS 4870 Physics Research II __
PHYS 4880 Physics Research III __

College Core:

CMM 2200 Small Group Presentation __
Written Communication (ENGL1900 or 1920) __
PHIL 2050 Ethics __
PSY 1010 General Psychology __
SOC 1100 Introduction to Sociology __
THEO 1000 Theological Foundations __
ENGL Upper Level Course (Writing intensive) __
Cultural Diversity Elective (One course) __

Open Elective:

One course __