

Major in Engineering-Physics (BS) – Science Option

120 hours

University Requirement - 2 hours

GSTD 1002 Freshman Seminar

General Education – 18 hours (17 hours of mathematics, biological science, physical science, social science, and fine arts/humanities courses are included in the major.)

Chemistry - 8 hours

CHEM 1023/1021 University Chemistry I/Lab
CHEM 1123/1121 University Chemistry II/Lab

Physics – 26 hours

PHYS 2203/2201 University Physics I/Lab
PHYS 2213/2211 University Physics II/Lab
PHYS 3033 Electromagnetism
PHYS 3053 Modern Physics
PHYS 3113 Advanced Physics Laboratory
PHYS 4013 Optics
PHYS 4043 Analytical Mechanics
PHYS 4053 Quantum Mechanics

Engineering - 31 hours

ENGR 1023/1021 Introduction to Engineering/Lab
ENGR 1212 Engineering Graphics
ENGR 2020 Engineering Exams*
ENGR 2033 Electrical Circuits I
ENGR 2143 Statics
ENGR 3003 Fluid Mechanics
ENGR 3013 Thermodynamics
ENGR 3023 Heat Transfer
ENGR 3073 Engineering Economics Analysis
ENGR 3102 Solid Mechanics Lab
ENGR 3112 Thermal Fluid Science Lab
ENGR 3163 Computer Aided Engineering Analysis

*Students must register for this course each fall/spring semester as an exam period for all Engineering and/or Physics courses sophomore and up. See course description.

Mathematics - 19 hours

MATH 1525 Calculus I
MATH 1545 Calculus II
MATH 2563 Calculus III
MATH 2753 Linear Algebra
MATH 3033 Differential Equations

Computer Science – 6 hours

CSCI 2103 Computer Science I
CSCI 2113 Computer Science II

Electives – 10 hours of upper level electives. Engineering, physics or mathematics courses recommended.

No minor is required in this major.

Engineering-Physics Science Option (BS)

Suggested Plan of Study

2018-2019 Catalog

Fall - Semester 1		Spring - Semester 2	
ENGL 1113 Composition I	3	ENGL 1123 Composition II	3
MATH 1525 Calculus I	5	MATH 1545 Calculus II	5
PHYS 2203/2201 University Physics I/Lab	4	PHYS 2213/2211 University Physics II/Lab	4
ENGR 1023 Introduction to Engineering	3	ENGR 1021 Introduction to Engineering Lab	1
GSTD 1002 Freshman Seminar	2	ENGR 2143 Statics	3
		ENGR 2020 Engineering Exams	0
Total Semester Hours	17	Total Semester Hours	16
Fall - Semester 3		Spring - Semester 4	
MATH 2563 Calculus III	3	MATH 3033 Differential Equations	3
CHEM 1023/1021 University Chemistry I/Lab	4	CHEM 1123/1121 University Chemistry II/Lab	4
ENGR 2033 Electrical Circuits I	3	MATH 2753 Linear Algebra	3
PHYS 3053 Modern Physics	3	CSCI 2103 Computer Science I	3
ENGR 1212 Engineering Graphics	2	PHYS 3033 Electromagnetism	3
ENGR 2020 Engineering Exams		ENGR 2020 Engineering Exams	
Total Semester Hours	15	Total Semester Hours	16
Fall - Semester 5		Spring - Semester 6	
ENGR 3003 Fluid Mechanics	3	ENGR 3023 Heat Transfer	3
CSCI 2113 Computer Science II	3	ENGR 3073 Engineering Economics	3
ENGR 3013 Thermodynamics	3	ENGR 3112 Thermal Fluid Science Lab	2
PHYS 3113 Advanced Physics Laboratory	3	PHYS 4013 Optics	3
ENGR 3102 Solid Mechanics Lab	2	ENGR 3163 Computer Aided Engineering Analysis	3
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	14	Total Semester Hours	14
Fall - Semester 7		Spring - Semester 8	
Fine Arts/Humanities (ART 2013, HUM 2003, ENGL 2213, ENGL 2223, MUS 2003 or MUS 2013, PHIL 2403, or THEA 2003)	3	*Social Science choice (ECON 2103, FIN 2003, GEOG 2003 HIST 1003, HIST 1013, HIST 2013, HIST 2023, PSCI 2003, PSYC 2003, SOC 1003, or SOC 2003)	3
*HIST 2013 or 2023 U.S. History I or II or PSCI 2003 American Government: National	3	PHYS 4053 Quantum Mechanics	3
PHYS 4043 Analytical Mechanics	3	UL Elective (ENGR, MATH, or PHYS recommended)	4
Fine Arts/Humanities (ART 2013, HUM 2003, ENGL 2213, ENGL 2223, MUS 2003 or MUS 2013, PHIL 2403, or THEA 2003)	3	UL Elective (ENGR, MATH, or PHYS recommended)	3
UL Elective (ENGR, MATH, or PHYS recommended)	3		
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	15	Total Semester Hours	13

Total hours required for major – 120

*Note: Must have six hours of social science courses. Three hours must be U.S. History I, U.S. History II or American Government: National.