

Major in Engineering-Physics (BS) – Chemical Engineering 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.)

Chemical Engineering - 52 hours

ENGR	1023/1021	Introduction to Engineering/Lab
ENGR	1212	Engineering Graphics
ENGR	2020	Engineering Exams*
ENGR	2043	Properties of Materials
ENGR	2053	Chemical Engineering Fundamentals
ENGR	2143	Statics
ENGR	3163	Computer Aided Engineering Analysis
ENGR	3003	Fluid Mechanics
ENGR	3013	Thermodynamics
ENGR	3023	Heat Transfer
ENGR	3063	Mass Transfer
ENGR	3073	Engineering Economics
ENGR	3083	Numerical Methods in Engineering
ENGR	3112	Thermal Fluid Science Lab
ENGR	3352	Chemical Engineering Lab
ENGR	4023	Senior Design Project
ENGR	4033	Instrumentation and Control Systems
ENGR	4043	Chemical Engineering Reactor Design
ENGR	4703	Work Experience Learning I

*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.

Chemistry - 12 hours

CHEM	1023/1021	University Chemistry I/Lab
CHEM	1123/1121	University Chemistry II/Lab
CHEM	3003/3001	Organic Chemistry I/Lab

Computer Science – 3 hours

CSCI	2103	Computer Science I
------	------	--------------------

Mathematics - 16 hours

MATH	1525	Calculus I
MATH	1545	Calculus II
MATH	2563	Calculus III
MATH	3033	Differential Equations

Physics - 8 hours

PHYS	2203/2201	University Physics I/Lab
PHYS	2213/2211	University Physics II/Lab

Other – 3 hours

ENGL	3003	Advanced Professional Writing
------	------	-------------------------------

Electives – 6 hours selected from upper level physics or engineering.

Engineering Physics Chemical Engineering 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
CHEM 1023/1021 University Chemistry I/Lab	4	CHEM 1123/1121 University Chemistry II/Lab	4
PHYS 2203/2201 University Physics I/Lab	4	PHYS 2213/2211 University Physics II/Lab	4
GSTD 1002 Freshman Seminar	2		
Total Semester Hours	18	Total Semester Hours	16
Fall - Semester 3		Spring - Semester 4	
ENGR 1023 Introduction to Engineering	3	CHEM 3003/3001 Organic Chemistry I/Lab	4
ENGR 2143 Statics	3	CSCI 2103 Computer Science I	3
MATH 2563 Calculus III	3	ENGR 1021 Introduction to Engineering Lab	1
ENGR 1212 Engineering Graphics	2	ENGR 2043 Properties of Materials	3
ENGR 2053 Chemical Engineering Fundamentals	3	MATH 3033 Differential Equations	3
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	14	Total Semester Hours	14
Fall - Semester 5		Spring - Semester 6	
ENGR 3013 Thermodynamics	3	*HIST 2013 or 2023 U.S. History I or II or PSCI 2003 American Government: National	3
ENGR 3003 Fluid Mechanics	3	ENGR 3023 Heat Transfer	3
ENGR 3063 Mass Transfer	3	ENGR 3112 Thermal Fluid Science Lab	2
ENGL 3003 Advanced Professional Writing	3	ENGR 3352 Chemical Engineering Lab	2
Fine Arts/Humanities (ART 2013, HUM 2003, ENGL 2213, ENGL 2223, MUS 2003 or MUS 2013, PHIL 2403, THEA 2003 or Foreign Language)	3	ENGR 3083 Numerical Methods in Engineering	3
		ENGR 3163 Computer Aided Engineering Analysis	3
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	15	Total Semester Hours	16
Fall - Semester 7		Spring - Semester 8	
*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	Fine Arts/Humanities (ART 2013, HUM 2003, ENGL 2213, ENGL 2223, MUS 2003 or MUS 2013, PHIL 2403, THEA 2003 or Foreign Language)	3
ENGR 4033 Instrumentation and Control Systems	3	ENGR 4023 Senior Design Project	3
UL Physics or Engineering Elective	3	ENGR 4703 Work Experience Learning I	3
ENGR 4043 Chemical Engineering Reactor Design	3	ENGR 3073 Engineering Economics	3
UL Physics or Engineering Elective	3		
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	15	Total Semester Hours	12

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.