

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

Mechanical Engineering - 55 hours

ENGR	1023/1021	Introduction to Engineering/Lab
ENGR	1212	Engineering Graphics
ENGR	2020	Engineering Exams*
ENGR	2033	Electrical Circuits I
ENGR	2043	Properties of Materials
ENGR	2143	Statics
ENGR	2163	Dynamics
ENGR	3163	Computer Aided Engineering Analysis
ENGR	3003	Fluid Mechanics
ENGR	3013	Thermodynamics
ENGR	3023	Heat Transfer
ENGR	3043	Mechanics of Materials
ENGR	3073	Engineering Economics
ENGR	3083	Numerical Methods in Engineering
ENGR	3102	Solid Mechanics Lab
ENGR	3112	Thermal Fluid Science Lab
ENGR	3143	Manufacturing Processes
ENGR	4153	Heating, Ventilation, & Air Conditioning
ENGR	4013	Machine Design
ENGR	4023	Senior Design Project

*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 - 8 hours

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

Computer Science – 3 hours

CSCI	2103	Computer Science I
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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

Electives – 10 hours of upper-level physics or engineering electives to meet the 40 junior/senior hour requirement.

Engineering Physics - Mechanical 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
ENGR 1023 Introduction to Engineering	3	ENGR 2143 Statics	3
PHYS 2203/2201 University Physics I/Lab	4	PHYS 2213/2211 University Physics II/Lab	4
GSTD 1002 Freshman Seminar	2	ENGR 2020 Engineering Exams	0
ENGR 2020 Engineering Exams	0		
Total Semester Hours	17	Total Semester Hours	15
Fall - Semester 3		Spring - Semester 4	
MATH 2563 Calculus III	3	CSCI 2103 Computer Science I	3
ENGR 1021 Introduction to Engineering Lab	1	CHEM 1123/1121 University Chemistry II/Lab	4
CHEM 1023/1021 University Chemistry I/Lab	4	ENGR 2043 Properties of Materials	3
ENGR 1212 Engineering Graphics	2	ENGR 2163 Dynamics	3
ENGR 2033 Electrical Circuits I	3	MATH 3033 Differential Equations	3
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	13	Total Semester Hours	16
Fall - Semester 5		Spring - Semester 6	
*HIST 2013 or 2023 U.S. History I or II or PSCI 2003 American Government: National	3	ENGR 3163 Computer Aided Engineering Analysis	3
ENGR 3013 Thermodynamics	3	ENGR 3023 Heat Transfer	3
ENGR 3033 Fluid Mechanics	3	ENGR 3112 Thermal Fluid Science Lab	2
ENGR 3102 Solid Mechanics Lab	2	ENGR 3083 Numerical Methods in Engineering	3
ENGR 3043 Mechanics of Materials	3	ENGR 3143 Manufacturing Processes	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	
ENGR 4153 Heating, Ventilation, and Air Conditioning	3	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	Fine Arts/Humanities (ART 2013, HUM 2003, ENGL 2213, ENGL 2223, MUS 2003 or MUS 2013, PHIL 2403, or THEA 2003)	3
ENGR 4013 Machine Design	3	UL Engineering or Physics Elective	4
ENGR 3073 Engineering Economics	3	ENGR 4023 Senior Design Project	3
UL Engineering or Physics Elective	3	UL Engineering or Physics Elective	3
ENGR 2020 Engineering Exams	0	ENGR 2020 Engineering Exams	0
Total Semester Hours	15	Total Semester Hours	16

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.