

Technical Electives	11–16
Electives outside Major Rubric	6
Total Hours—B.S. in Engineering Physics	128

Required outside the College of Engineering

Courses	Hours
ENGL 160—English Composition I	3
ENGL 161—English Composition II	3
Humanities electives ^a	6
Social sciences electives ^a	6
MATH 180—Calculus I	5
MATH 181—Calculus II	5
MATH 210—Calculus III	3
MATH 220—Introduction to Differential Equations I	3
PHYS 141—General Physics I (Mechanics)	4
PHYS 142—General Physics II (Electricity and Magnetism)	4
PHYS 215—Mathematical Methods for Physicists	4
PHYS 244—General Physics III (Modern Physics)	3
PHYS 411—Quantum Mechanics I	4
PHYS 481—Modern Experimental Physics I	4
CHEM 112—General College Chemistry I	5
Total Hours—Required outside the College of Engineering	62

^aHumanities and social sciences electives should be selected from the Course Distribution Chart in the College of Liberal Arts and Sciences section of the catalog. Students must choose courses from two different departments in the humanities and in the social sciences. One of the humanities or social sciences electives must be an approved cultural diversity course. A list of approved cultural diversity courses may also be found in the College of Liberal Arts and Sciences section.

Required in the College of Engineering

Courses	Hours
ENGR 100—Orientation ^a	0 ^a
CME 201—Statics	3
CME 203—Strength of Materials	3
CME 260—Properties of Materials	3

Senior Design Requirement chosen from the following: 4–7

BIOE 396—Senior Design I (3)
BIOE 397—Senior Design II (3)

OR

CME 396—Senior Design I (3)
CME 397—Senior Design II (3)

OR

CHE 396—Senior Design I (4)
CHE 397—Senior Design II (3)

OR

ECE 396—Senior Design I (2)
ECE 397—Senior Design II (2)

OR

ME 396—Senior Design (4)

One of the following courses: 3

CHE 201—Introduction to Thermodynamics (3)
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OR

ME 205—Introduction to Thermodynamics (3)

One of the following courses: 3

CS 102—Introduction to Programming (3)
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OR

CS 108—Fortran Programming for Engineers (3)
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ECE 225—Circuit Analysis	4
ECE 221—Electromagnetics Laboratory	1
ECE 310—Discrete and Continuous Signals and Systems	3
ECE 346—Solid State Device Theory	4
ME 212—Fundamentals of Fluid Mechanics	3

Total Hours—Required in the College of Engineering 34–37

^aENGR 100 is a one-semester-hour course, but the hour does not count toward the total hours required for graduation.

Advanced Electromagnetics Requirement

Courses	Hours
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One of the following two-course sequences: 7–8

ECE 320—Transmission Lines (4)
ECE 322—Communication Electromagnetics (3)

OR

PHYS 401—Electromagnetism I (4)
PHYS 402—Electromagnetism II (4)

Total Hours—Advanced Electromagnetics Requirement 7–8**Advanced Mechanics Requirement**

Courses	Hours
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One of the following courses: 3–4

ME 413—Dynamics of Mechanical Systems (3)

OR

PHYS 441—Theoretical Mechanics (4)

Total Hours—Advanced Mechanics Requirement 3–4**Technical Electives**

Courses	Hours
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Eleven to sixteen semester hours from a list of technical electives available from the advisor. These courses should be selected in consultation with the advisor and should be chosen from approved sequences in the following areas: 11–16

Bioengineering	
Civil and Materials Engineering	
Chemical Engineering Design	
Chemical Engineering Multiphase Transport Phenomena	
Chemical Engineering Chemical Process	
Computer Science	
Electrical and Computer Engineering Circuits and VLSI	
Electrical and Computer Engineering Communications Signal and Processing	
Electrical and Computer Engineering Solid State, MEMS, and Nanotechnology	
Electrical and Computer Engineering Electromagnetics and Optics	
Mechanical Engineering Thermal/Fluid Science	
Mechanical Engineering Mechanical Systems	
Modern Physics	
Total Hours—Technical Electives	11–16

Electives outside Major Rubric

Courses	Hours
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Electives outside the PHYS and ECE rubrics	6
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Total Hours—Electives outside the Major Rubric 6