

# ENGINEERING MAJOR

## Requirements for a Major in Engineering Bachelor of Science

Code	Title	Hours
<b>Must complete the following required math and science courses</b>		<b>30</b>
PHYS 151	Introductory Physics	
PHYS 152	Introductory Physics	
PHYS 210	Digital Electronics	
PHYS 250	Mathematical Physics	
MATH 131	Calculus I	
MATH 132	Calculus II	
MATH 203	Multivariable Calculus	
MATH 307	Differential Equations: A Modeling Perspective	
<b>Must complete the following Engineering Physics courses</b>		<b>16</b>
EPHY 150	Introduction to Engineering:Stress, Strain, and Fluids	
EPHY 250	Engineering Mechanics:Statics	
EPHY 255	Engineering Mechanics:Dynamics	
EPHY 300	Mechanics of Solids	
EPHY 350	Fluid Mechanics	
<b>Must complete the following Engineering courses</b>		<b>20</b>
ENGR 280	CAE Design	
ENGR 320	Engineering Thermodynamics	
ENGR 400	Solid Mechanics Lab	
ENGR 401	Fluid Mechanics Lab	
ENGR 420	CAE Analysis	
ENGR 450	Senior Design Seminar	
ENGR 451	Engineering Capstone	
<b>Must complete one Ethics course selected from the following</b>		<b>3</b>
PHIL 212	Ethics	
PHIL 213	Environmental Ethics	
RELS 235	Religious Ethics	
RELS 237	Christian Ethics	
<b>Must complete two Engineering elective courses selected from the following</b>		<b>6</b>
ENGR 321	Thermal Systems Design (Must complete two Engineering elective courses selected from the following )	
ENGR 331	Mechanical Systems Design	
ENGR 335	Advanced Solid Mechanics	
ENGR 345	Energy Conversion Systems	
ENGR 373	Principles of Geotechnical Engineer	
<b>Must complete one additional math or science elective selected from 3-4 the following</b>		
ASTR 101	Introductory Astronomy	
ASTR 231	Astrophysics I	
ASTR 232	Astrophysics II	
BIOL 121	Foundations of Experimental Biology	
BIOL 123	Principles in Molecular Biology	
CHEM 215	Principles of Chemistry \$50 course fee	
CHEM 220	Basic Inorganic Chemistry	

CHEM 230	Quantitative Chemical Analysis	
MATH 111	Introduction to Statistics	
MATH 113	Introduction to Statistics	
MATH 213	Elementary Linear Algebra	
MATH 220	Discrete Mathematics	
PHYS 205	Modern Physics	
PHYS 340	Electricity and Magnetism	
PHYS 430	Introductory Quantum Mechanics	
<b>Total Hours</b>		<b>78-79</b>

A student who majors in Engineering may not also major or minor in Engineering Physics.

For students interested in majoring in Engineering, the recommend major courses to begin with are PHYS 151-152, MATH 131-132, and EPHY 150. Students should begin these courses in their freshman year.