

## Bachelor of Science in Mechanical Engineering

### Curriculum

Required courses and recommended terms during which they should be taken:

Freshman Year	Fall	
CHE 221	General Chemistry	5
MET 111	Orientation I	2
WRI 121	English Composition	3
	Humanities/Social Science elective *	3
<b>Total</b>		<b>13</b>

Freshman Year	Winter	
CHE 222	General Chemistry	5
MET 112	Orientation II	2
MFG 103	Introductory Welding Processes	3
WRI 122	English Composition	3
<b>Total</b>		<b>13</b>

Freshman Year	Spring	
MATH 251	Differential Calculus	4
MFG 120	Manufacturing Processes I	4
MET 160	Materials I	3
MET 241	CAD for Mechanical Design I	2
SPE 111	Fundamentals of Speech	3
<b>Total</b>		<b>16</b>

Sophomore Year	Fall	
MATH 252	Integral Calculus	4
MET 242	CAD for Mechanical Design II	2
PHY 221	General Physics with Calculus	4
WRI 227	Technical Report Writing	3
	Economics elective	3
<b>Total</b>		<b>16</b>

Sophomore Year	Winter	
ENGR 211	Statics	4
MATH 254N	Vector Calculus I	4
MATH 361	Statistical Methods I	
or		
MATH 465	Mathematical Statistics	4
PHY 222	General Physics with Calculus	4
<b>Total</b>		<b>16</b>

Sophomore Year	Spring	
ENGR 266	Computer Programming for Engineers	3
ENGR 213	Strength of Materials	4
ENGR 236	Fundamentals of Electric Circuits	3
MATH 321	Applied Differential Equations I	4
PHY 223	General Physics with Calculus	4
<b>Total</b>		<b>18</b>

Junior Year	Fall	
MATH 341	Linear Algebra I	3
MFG 314	Geometric Dimensioning and Tolerancing	3
MECH 318	Fluid Mechanics I	4
MECH 363	Instrumentation	3
MET 375	Solid Modeling	3
<b>Total</b>		<b>16</b>

Junior Year	Winter	
ENGR 212	Dynamics	3
ENGR 355	Thermodynamics	3
MECH 315	Machine Design I	3
MECH 360	Materials II	3
MET 326	Electric Power Systems	3
SPE 321	Small Group and Team Communication	3
<b>Total</b>		<b>18</b>

Junior Year	Spring	
HUM 125	Introduction to Technology, Society and Values	3
MATH 451	Numerical Methods I	4
MECH 313	Thermodynamics II	3
MECH 316	Machine Design II	3
	MECH Elective	3
<b>Total</b>		<b>16</b>

Senior Year	Fall	
MECH 323	Heat Transfer I	3
MECH 351	Finite Element Analysis	3
MECH 490	Senior Projects I	3
WRI 327	Advanced Technical Writing	3
	MECH elective	3
	Humanities/Social Science elective *	3
<b>Total</b>		<b>18</b>

Senior Year	Winter	
MECH 417	Fluid Mechanics II	3
MECH 437	Heat Transfer II	2
MECH 480	Vibrations	3
MECH 491	Senior Projects II	3
PHIL 331	Ethics in the Professions	3
	Humanities/Social Science elective *	3
<b>Total</b>		<b>17</b>

Senior Year	Spring	
ENGR 485	Fundamentals of Engineering Exam	1
MGT 345	Engineering Economy	3
MECH 436	Applied Control Systems	3
MECH 492	Senior Projects III	3
	MECH elective	3
	Humanities/Social Science elective *	3
<b>Total</b>		<b>16</b>

\* In addition to HUM 125, PHIL 331 and the Economics elective students must take 3 credits of Humanities and 9 credits of Social Science. Activity or performing based Humanities courses are not accepted.