

## 2018-2019 SAMPLE PARADIGM for a B.S. in Mechanical Engineering

This sample paradigm shows a normal 4-year progression towards a degree in mechanical engineering. Some of the courses should be taken in this order due to prerequisite structures, others may be switched.

### FRESHMAN YEAR - Semester I

ME 121	Solids Modeling	3 crs.
CHEM 115 & 115L	General Chemistry & Lab	4 crs.
ENG 111	English Composition I	3 crs.
Math 131	Calculus I	3 crs.
	General Education	3 crs.
CBU 101	Orientation	0 cr.
	<i>Total</i>	<i>16 crs.</i>

### FRESHMAN YEAR - Semester II

ME 201	Manufacturing Processes	3 crs.
ENG 112	English Composition II	3 crs.
PHYS 150 & 150L	Physics I & Lab	4 crs.
MATH 132	Calculus II	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>16 crs.</i>

### SOPHOMORE YEAR - Semester I

CE 201	Statics	3 crs.
ME 112	Scientific Programming	3 crs.
MATH 231	Differential Equations	3 crs.
PHYS 251 & 251L	Physics II & Lab	4 crs.
	General Education	3 crs.
	<i>Total</i>	<i>16 crs.</i>

### SOPHOMORE YEAR - Semester II

ECE 221	Electric Circuits I	3 crs.
ME 202	Dynamics	3 crs.
ME 305	Thermodynamics I	3 crs.
ME 210	Mechanics of Materials	3 crs.
MATH 232	Calculus III	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>18 crs.</i>

**JUNIOR YEAR - Semester I**

ME 301	Engineering Instrumentation Lab	2 crs.
ME 313	Fluid Mechanics	3 crs.
ME 316	Thermodynamics II	3 crs.
ME 317	Kinematics	3 crs.
PHYS 252	Physics III	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>17 crs.</i>

**JUNIOR YEAR - Semester II**

ME 302	Energy Systems Lab	2 crs.
ME 306	Heat Transfer	3 crs.
ME 318	Dynamics of Machines	3 crs.
ME 322	Control Systems	3 crs.
MATH	Math Elective	3 crs.
	General Education	3 crs.
	<i>Total</i>	<i>17 crs.</i>

**SENIOR YEAR - Semester I**

ME 400	The Compleat Engineer	3 crs.
ME 401	Mechanical Systems Lab	2 crs.
ME 407	ME Project I	3 crs.
ME 420	Machine Design	3 crs.
ME 421	Thermal Systems Analysis & Design	3 crs.
ME	Major Elective (300/400 level course)	3 crs.
	<i>Total</i>	<i>17 crs.</i>

**SENIOR YEAR - Semester II**

ME 314	Engineering Economy	3 crs.
ME 408	ME Project II	3 crs.
ME	Major Elective (300/400 level course)	3 crs.
MATH	Math Elective	3 crs.
	Program Option	3 crs.
	<i>Total</i>	<i>15 crs.</i>

Total credits required for bachelor's degree completion: 132