

# Engineering (Bachelor of Science Engineering) Course Plan Mechanical Concentration

TIER III: Math ACT of 25 or higher/Math RSAT of 590 or higher

Freshman Fall Semester			Freshman Spring Semester		
MATH 115	Precalculus	3	MATH 122	Calculus I	4
ENGR 100	Freshman Seminar*	1	BIOL 111	Basic Biology	4
ENGR 120	Foundations of Engineering Design I*	3	ENGR 121	Foundations of Engineering Design II*	3
ENGL 101	Academic Writing	3	ENGL 102	Academic Writing & Literature	3
CHEM 111	General Chemistry I	4	CHEM 113	General Chemistry II	4
			CUC 100	Connections	0.5
<b>Semester Total:</b>		<b>14.0</b>	<b>Semester Total:</b>		<b>18.5</b>

Sophomore Fall Semester			Sophomore Spring Semester		
MATH 223	Calculus II	4	MATH 224	Calculus III	4
PHYS 251	Fundamentals of Physics I	4	ENGR 260	Electrical Circuits*	4
ENGR 220	Statics & Strength of Materials	3	ENGR 330	Dynamics	3
ENGR 240	Engineering Materials & Processes*	4	PHYS 252	Fundamentals of Physics II	4
ENGL 2xx	Literature	3	ECON 201	Microeconomics	3
CUC 200	Connections	0.5			
<b>Semester Total:</b>		<b>18.5</b>	<b>Semester Total:</b>		<b>18.0</b>

Junior Fall Semester			Junior Spring Semester		
MATH 310	Differential Equations and Linear Algebra	4	ENGR 320	Fluids*	3
ENGR 300	Engineering Economics	3	MECH 345	Advanced Thermodynamic Systems	3
ENGR 310	Thermodynamics*	3	MECH 365	Heat Transfer	3
ENGL 305	Technical Writing and Presentations	3	MECH 375	Machine Design	3
MECH 325	Mechanics of Materials*	4	CHRS 125	Introduction to Christianity	3
<b>Semester Total:</b>		<b>17.0</b>	<b>Semester Total:</b>		<b>15.0</b>

Senior Fall Semester			Senior Spring Semester			
MECH 440	System Dynamics*	3	ENGR 492	Senior Design II	2	
HUM/FINE ARTS	Elective	3	MECH 480	Lean Manufacturing & Quality Engineering*	3	
ENGR 491	Senior Design I	4	ENGR 498	Special Topics in Engineering	3	
ENGR 460	Statistical Methods for Engineers	3	ART 131, MUSIC 131 or THEA 131	Fine Arts	3	
MECH 435	Manufacturing Engineering*	3	HIST 111 or 112	Western Civilization 1 or 2	3	
PE 185	Lifetime Wellness	2	HUM/FINE ARTS or SOC/BEH SCI	Elective	3	
<b>Semester Total:</b>		<b>18.0</b>	<b>Semester Total:</b>		<b>17.0</b>	
					<b>Degree Total</b>	<b>136</b>

# **Engineering (Bachelor of Science Engineering) Course Plan Mechanical Concentration**

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Total Math and Science Hours: 39 (includes statistics for engineers but not pre-calc)

Total Engineering Hours: 60 (includes engineering economics)

## ABET Requirements

Math and Basic Science: minimum of 30 semester credit hours

Engineering topics: minimum of 45 semester credit hours

**Bold-Faced Font** – designates a course taught by the School of Engineering

**Blue Box** – indicates a course taken by all ENGR students

**\*** - indicates class-lab