

# B.S. MECHANICAL ENGINEERING

(Math 108)

## Plan of Study

	Fall		Spring
Year 1	<b>FYEX</b> Foundation for College Success		
	<b>ENGR 100</b> (FYE) Introduction to Engineering Design		<b>CISC 130</b> Introduction to Programming & Problem Solving Science (Lab)
	<b>ENGR 170</b> Mechanical Engineering Graphics		<b>PHYS 211</b> Classical Physics I
	<b>MATH 108</b> Calculus with Review I		<b>MATH 114</b> Calculus II
	<b>CORE</b> requirement		<b>CORE</b> requirement
	<b>CORE</b> requirement		
		<b>January-term</b>	
	<b>MATH 109</b> Calculus with Review II		<b>CORE</b> requirement
Year 2	<b>Fall</b>		<b>Spring</b>
	<b>ENGR 220</b> Statics		<b>ENGR 221</b> Mechanics of Materials (Lab)
	<b>MATH 200</b> Multi-Variable Calculus	↔	<b>MATH 210</b> Introduction to Differential Equations & Systems
	<b>PHYS 212</b> Classical Physics II	↔	<b>CHEM 109</b> General Chemistry for Engineers (Lab)
	<b>CORE</b> requirement		<b>CORE</b> requirement
		<b>January-term</b>	
	<b>CORE</b> requirement	↔	
Year 3	<b>Fall</b>		<b>Spring</b>
	<b>ENGR 255</b> Fabrication Skills (Lab)		
	<b>ENGR 322</b> Dynamics (Lab)	↔	<b>ENGR 350</b> Introduction to Electronics (Lab)
	<b>ENGR 371</b> Manufacturing Processes & Statistical Control	↔	<b>ENGR 320</b> Machine Design & Synthesis (Lab)
	<b>ENGR 381</b> Thermodynamics (Lab)		<b>ENGR 383</b> Fluid Mechanics (Lab)
	<b>CORE</b> requirement		<b>CORE</b> requirement
	<b>January-term</b>		<b>Summer</b>
Year 4	<b>Fall</b>		<b>Spring</b>
	<b>ENGR 480</b> Engineering Design Clinic I		<b>ENGR 481</b> Engineering Design Clinic II
	<b>ENGR 410</b> Control Systems & Automation (Lab)	↔	<b>ENGR 384</b> Heat Transfer (Lab)
	<b>ENGR 361</b> Engineering Materials (Lab)	↔	<b>ENGR XXX</b> Engineering Elective
	<b>CORE</b> requirement		<b>CORE</b> requirement
	<b>January-term</b>		<b>Summer</b>

\* arrow indicates that the two courses can be interchanged

\* this illustrates just one example of how all courses could be taken within a 4-year plan

## **Complete Course Listing:**

### **Engineering Courses:**

ENGR 100 - Introduction to Engineering (2 credits)  
ENGR 170 - Mechanical Engineering Graphics (2 credits)  
ENGR 220 - Statics (4 credits)  
ENGR 221 - Mechanics of Materials (4 credits)  
ENGR 255 - Fabrication Skills (0 credits)  
ENGR 320 - Machine Design and Synthesis (4 credits)  
ENGR 322 - Dynamics (4 credits)  
ENGR 350 - Introduction to Electronics (4 credits)  
ENGR 361 - Engineering Materials (4 credits)  
ENGR 371 - Manufacturing Processes and Statistical Control (4 credits)  
ENGR 381 - Thermodynamics (4 credits)  
ENGR 383 - Fluid Mechanics (4 credits)  
ENGR 384 - Heat Transfer (4 credits)  
ENGR 410 - Control Systems and Automation (4 credits)  
ENGR 480 - Engineering Design Clinic I (4 credits)  
ENGR 481 - Engineering Design Clinic II (4 credits)  
4 Credits of Engineering Electives  
60 Engineering Credits

### **Allied Requirements:**

MATH 108 - Calculus with Review I (4 credits)  
MATH 109 - Calculus with Review II (4 credits)  
MATH 114 - Calculus II (4 credits)  
MATH 200 - Multi-Variable Calculus (4 credits)  
MATH 210 - Introduction to Differential Equations and Systems (4 credits)  
PHYS 211 - Classical Physics I (4 credits)  
PHYS 212 - Classical Physics II (4 credits)  
CHEM 109 - General Chemistry for Engineers (4 credits)  
CISC 130 - Introduction to Programming and Problem Solving in the Sciences (4 credits)  
36 Allied Requirement Credits

### **University of St. Thomas Core Curriculum:**

FYEX Foundation for College Success (1 credit)  
Language and Culture (0-8 credits)  
Literature and Writing (4 credits)  
Philosophy and Theology (12 credits)  
Social Analysis (4 credits)  
Fine Arts (4 credits)  
Historical Studies (4 credits)  
Integrations in the Humanities (8 credits)  
*Some of these courses must satisfy the flagged requirements; check your degree evaluation*  
45 Core Curriculum Credits