

# B.S. MECHANICAL ENGINEERING

(Math 114)

## Plan of Study

Year 1	<b>Fall</b>		<b>Spring</b>	
	FYEX Foundation for College Success			
	ENGR 100 (FYE) Introduction to Engineering Design		CISC 130 Introduction to Programming & Problem Solving in the Sciences	
	ENGR 170 Mechanical Engineering Graphics		PHYS 211 Classical Physics I	
	MATH 114 Calculus II		MATH 200 Multi-Variable Calculus	
	CORE requirement		CORE requirement	
	CORE requirement			
	<b>January-term</b>		<b>Summer</b>	
CORE requirement				
Year 2	<b>Fall</b>		<b>Spring</b>	
	ENGR 220 Statics		ENGR 221 Mechanics of Materials (Lab)	
	MATH 210 Introduction to Differential Equations & Systems		ENGR 381 Thermodynamics (Lab)	
	CHEM 109 General Chemistry for Engineers (Lab)		PHYS 212 Classical Physics II	
	CORE requirement		CORE requirement	
	<b>January-term</b>		<b>Summer</b>	
Year 3	<b>Fall</b>		<b>Spring</b>	
	ENGR 255 Fabrication Skills (Lab)			
	ENGR 322 Dynamics (Lab)		↔	ENGR 350 Introduction to Electronics
	ENGR 371 Manufacturing Processes & Statistical Control		↔	ENGR 320 Machine Design & Synthesis
	CORE requirement		ENGR 383 Fluid Mechanics (Lab)	
	CORE requirement		CORE requirement	
	<b>January-term</b>		<b>Summer</b>	
Year 4	<b>Fall</b>		<b>Spring</b>	
	ENGR 480 Engineering Design Clinic I		ENGR 481 Engineering Design Clinic II	
	ENGR 410 Control Systems & Automation (Lab)		↔	ENGR 384 Heat Transfer (Lab)
	ENGR 361 Engineering Materials (Lab)		↔	ENGR XXX Engineering Elective
	CORE requirement		CORE 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 - Engineering Graphics and Design (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 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)  
28 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