

B.S. MECHANICAL ENGINEERING

(Air Force ROTC & Math 108)

Plan of Study

Year 1	Fall		Spring	
	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 108 Calculus with Review I		MATH 114 Calculus II	
	AERO 111 Heritage & Values of the U.S. Air Force I		AERO 112 Heritage & Values of the U.S. Air Force II	
	CORE requirement		CORE requirement	
	January-term		Summer	
MATH 109 Calculus with Review II				
Year 2	Fall		Spring	
	ENGR 220 Statics		ENGR 221 Mechanics of Materials (Lab)	
	MATH 200 Multi-Variable Calculus		↔ MATH 210 Introduction to Differential Equations & Systems	
	PHYS 212 Classical Physics II		↔ CHEM 109 General Chemistry for Engineers	
	AERO 211 Team & Leadership Fundamentals I		AERO 212 Team & Leadership Fundamentals II	
	CORE requirement		CORE requirement	
	January-term		Summer	
			AERO 450 Field Training	
Year 3	Fall		Spring	
	ENGR 255 Fabrication Skills (Lab)		CORE requirement	
	ENGR 381 Thermodynamics (Lab)		↔ ENGR 350 Introduction to Electronics (Lab)	
	ENGR 371 Manufacturing Processes & Statistical Control		↔ ENGR 320 Machine Design & Synthesis (Lab)	
	AERO 321 Leading People & Effective Communication I		AERO 322 Leading People & Effective Communication II	
	January-term		Summer	
Year 4	Fall		Spring	
	ENGR 383 Fluid Mechanics (Lab)		ENGR 384 Heat Transfer (Lab)	
	ENGR 322 Dynamics (Lab)		↔ ENGR 410 Control Systems & Automation (Lab)	
	AERO 421 National Security & Preparation for Active Duty I		AERO 422 National Security & Preparation for Active Duty II	
	CORE requirement		CORE requirement	
	January-term		Summer	
Year 5	Fall		Spring	
	ENGR 480 Engineering Design Clinic I		ENGR 481 Engineering Design Clinic II	
	ENGR 361 Engineering Materials (Lab)		↔ ENGR XXX Engineering Elective	
	CORE requirement		CORE requirement	
	CORE requirement		CORE requirement	

* this illustrates just one example of how all courses could be taken within a 5-year plan

* arrow indicates that the two courses can be interchanged

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

Aerospace Studies Minor Requirements:

AERO 111 - Heritage & Values of the United States Air Force I (1 credit)
AERO 112 - Heritage & Values of the United States Air Force II (1 credit)
AERO 211 - Team & Leadership Fundamentals I (1 credit)
AERO 212 - Team & Leadership Fundamentals II (1 credit)
AERO 321 - Leading People & Effective Communication I (4 credits)
AERO 322 - Leading People & Effective Communication II (4 credits)
AERO 421 - National Security & Preparation for Active Duty I (4 credits)
AERO 422 - National Security & Preparation for Active Duty II (4 credits)
AERO 450 - Field Training (2 credits)
AERO 200 - Leadership Laboratory (0 credits) - Must be taken every fall & spring semester.
AERO 201 - Physical Fitness Laboratory (0 credits) - Must be taken every fall & spring semester.
22 Aerospace Studies Minor Requirement Credits

University of St. Thomas Core Curriculum:

FYEX Foundation for College Success (1 credit)
Literature and Writing (4 credits)
Language and Culture (0-8 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