

**B.S. in Mechanical Engineering and AFROTC Option 1 or 3  
Plan of Study- Math 108**

	<b>Fall</b>	<b>Spring</b>	<b>Summer/ J-Term</b>
<b>Year 1</b>	<b>ENGR 150</b> Intro to Engineering		
	<b>MATH 108</b> Calculus with Review I	<b>MATH 109</b> Calculus with Review II	<b>MATH 114</b> Calculus II
	<b>ENGR 171</b> Engineering Graphics and Design	↔ <b>CISC 130</b> Introduction to Programming and Problem Solving in the Sciences (LAB)	
	<b>PHIL 115</b> Philosophy of the Human Person	Foreign Language 111*	
	<b>ENGL 121</b> Critical Thinking: Literature & Writing	<b>ENGL 20X</b> Texts in Conversation	
	<b>AERO 111</b> Foundations of the United States Air Force I	<b>AERO 112</b> Foundations of the United States Air Force II	
<b>Year 2</b>	<b>PHYS 211</b> Classical Physics I	<b>PHYS 212</b> Classical Physics II	
	<b>MATH 200</b> Multi-Variable Calculus	<b>ENGR 220</b> Statics	
	<b>MATH 210</b> Introduction to Differential Equations and Systems	<b>CHEM 109</b> General Chemistry for Engineers (LAB)	
	Foreign Language 112*	Foreign Language 211*	
	<b>AERO 211</b> Evolution of USAF Air and Space Power I	<b>AERO 212</b> Evolution of USAF Air and Space Power II	
<b>Year 3</b>	<b>ENGR 255</b> Fabrication Lab***		
	<b>ENGR 221</b> Mechanics of Materials (LAB)	<b>ENGR 320</b> Machine Design & Synthesis (LAB)	
	<b>ENGR 322</b> Dynamics (LAB)	↔ <b>ENGR 381</b> Thermodynamics (LAB)	
	<b>THEO 101</b> The Christian Theological Tradition	<b>ENGR 371</b> Manufacturing Processes and Statistical Control	
	<b>AERO 321</b> Air Force Leadership Studies I	<b>AERO 322</b> Air Force Leadership Studies II	
<b>Year 4</b>	<b>ENGR 383</b> Fluid Mechanics (LAB)	<b>ENGR 384</b> Heat Transfer (LAB)	
	<b>ENGR 350</b> Introduction to Electronics (LAB)	<b>ENGR 410</b> Control Systems and Automation	
	<b>THEO 2XX or 3XX**</b>	Social Sciences Elective **	
	<b>AERO 421</b> National Security Affairs I	<b>AERO 422</b> National Security Affairs II	
<b>Year 5</b>	<b>ENGR 480</b> Engineering Design Clinic I	<b>ENGR 481</b> Engineering Design Clinic II	
	<b>ENGR 361</b> Engineering Materials (LAB)	↔ <b>ENGR XXX</b> Engineering Elective	
	<b>PHIL 214</b> Introductory Ethics	<b>THEO 4XX</b>	
	<b>HIST 1XX</b>	Fine Arts Elective**	

\* May place out of one or more semesters if proficient at 3<sup>rd</sup> Level

\*\* May satisfy human diversity requirement

\*\*\* Lab skills must be retained for ENGR 320. Recommended to be taken in semester immediately preceding or (with instructor permission) in first half of semester concurrent with ENGR 320. May be taken in earlier semesters if student maintains lab shop skills proficiency.

↔ denotes that the two courses can be interchanged

**Engineering Courses:**

ENGR 150 – Introduction to Engineering (1 credit)  
ENGR 155 – Fabrication Lab (0 credits)  
ENGR 171 – Engineering Graphics and Design (4 credits)  
ENGR 220 – Statics (4 credits)  
ENGR 221 – Mechanics of Materials (4 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  
**61 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**

**Minor in Aerospace Studies:**

AERO 111 Foundations of the United States Air Force I (1 credit)  
AERO 112 Foundations of the United States Air Force II (1 credit)  
AERO 211 Evolution of USAF Air and Space Power I (1 credit)  
AERO 212 Evolution of USAF Air and Space Power II (1 credit)  
AERO 321 Air Force Leadership Studies I (4 credits)  
AERO 322 Air Force Leadership Studies II (4 credits)  
AERO 421 National Security Affairs I (4 credits)  
AERO 422 National Security Affairs II (4 credits)  
AERO 200 Leadership Laboratory (0 credits) (for option 3)  
**20 credits**

**Core Curriculum**

Three courses in foreign language (12 credits)  
Two courses in English (8 credits)  
Three courses in Theology\*\* (12 credits)  
Two courses in Philosophy (8 credits)  
One course in the Social Sciences\*\* (4 credits)  
One Fine Arts course\*\* (4 credits)  
One History course (4 credits)  
\*\*One of these courses must satisfy the human diversity requirement  
**52 core curriculum credits**

Total Credit Count: 169 (61 engineering credits + 108 non-engineering credits)