

**University of Texas at El Paso**  
**Aerospace and Mechanical Engineering Department**

Phone: (915) 747-5450

**B.S. in Aerospace Engineering Degree Plan**

Year	Semester I			Hrs	Semester II			Hrs
<b>Freshman</b>	MECH	1305	Graphic and Design Fundamentals +	3	MECH	1321	Mechanics I – Statics + (MATH 1411+ PHYS 2420+)	3
	RWS	1301	Rhetoric & Composition I +	3	HIST	1301	History of US to 1865 +	3
	MATH	1411	Calculus I +	4	RWS	1302	Rhetoric & Composition 2 + (RWS 1301+)	3
	PHYS	2320/2120	Physics I (MATH 1411 is CO requisite)	4	MATH	1312	Calculus II + (MATH 1411+)	3
	CS	1310 or 1320	Component Area (CS 1310, CS 1320, EL 1301, or UNIV1301)+	3	CHEM CHEM	1305 1105	Chemistry I +	4
				<b>17</b>				<b>16</b>
<b>Sophomore</b>	MECH	2322	Mechanics of Materials + (MECH 1321+)	3	MECH	2340	Mechanics II – Dynamics + (MECH 1321+)	3
	MATH	2313	Calculus III + (MATH 1312+)	3	MECH	2311	Introduction to Thermo-Fluid Science + (MATH 1312+)	3
	AERO	2331	Aerospace materials + (CHEM 1305+,CHEM 1105+)	3	MECH	2103	Engineering Computations + (MATH1312+)	1
	AERO	2131	Aerospace materials Lab (MECH 1305+)	1	MECH	2342	Electro-Mechanical Systems + (MATH 1312+)	3
	HIST	1302	History of US since 1865	3	CE	2326	Engineering Economics +	3
			Science Elective + (see NOTE 1)	4	MATH	2326	Differential Equations	3
					<b>17</b>			
<b>Junior</b>			Laboratory Experience (see NOTE 2)	1			Laboratory Experience (see NOTE 2)	1
	MECH	3352	Engineering Analysis (MATH 2326)	3	COMM	1302	Business and Professional Communication +	3
	AERO	3312	Aerodynamics I (MECH 2311+)	3	AERO	3343	System Modeling and Controls (MATH 2326+, MECH 2340+, MECH 2342+)	3
	AERO	3323	Aerospace Structures I (AERO 2331+, MECH 2322+)	3	AERO		Aero concentration I (NOTE 5)	3
	POLS	2310	Introduction to Politics +	3	AERO		Aero concentration II(NOTE 5)	3
	MATH		Math Elective (see NOTE 3)	3			Science/Math Elective+ (see NOTE 4)	3
					<b>16</b>			
<b>Senior</b>			Humanities Electives +	3	AERO	4366	Aerospace Senior Design	3
	AERO	4322	Aerospace Propulsion (CHEM 1305+,MECH 2311+)	3	AERO	4364	Aerospace Communications (MECH 2342+)	3
			Aero concentration III (NOTE 5)	3			Aero Free Elective (NOTE 6)	3
	AERO	4365	Aerospace Systems Engineering (CE 2326+, COMM 1302+)	3	POLS	2311	American Government and Politics	3
	AERO		Aero Free Elective (NOTE 6)	3			Visual and Performing Art Elective	3
					<b>15</b>			
<b>Total 128 Credit hrs</b>								

Laboratory Experience			
MECH	3123	Solid Mechanics Lab (MECH 2322+)	1
MECH	3113	Thermo-fluid Lab (MECH 2311+)	1
MECH	3103	Mechatronics Lab (MECH 2342+)	1

Aircraft Concentration			
AERO	4311	Flight Dynamics and Controls (AERO 3312, AERO 3343)	3
AERO	4312	Aircraft Design (AERO 3312, AERO3323, MECH 3352)	3
AERO	4313	Aerospace Structures II (AERO 3323)	3
AERO	4319	Special Topics in Aeronautics	3

Launch Vehicles and Missiles Concentration			
AERO	4331	Aerodynamics II (AERO 3312)	3
AERO	4332	Hypersonic Vehicle Design (MECH 3352)	3
AERO	4335	Aerospace Structural Dynamics (MATH 2326+, MECH 2340+)	3
AERO	4329	Special Topics in Aerostructures (AERO 3323)	3
AERO	4339	Special Topics in Hypersonic	3

Satellite Concentration			
AERO	4351	Orbit and Attitude Dynamics (MATH 2326+, AERO 3343)	3
AERO	4353	Spacecraft Environments (MATH 2326 or PHYS 2420)	3
AERO	4355	Space Mission Design	3
AERO	4359	Special Topics in Astronautics	3

**Notes:** Prerequisites listed in parentheses, +Grade of C or better required

1. Must be either CHEM 1306 with CHEM 1106, PHYS 2321+2121 or by permission of advisor.
2. From the department-approved list of Laboratory Experience courses
3. Selected from MATH 3323, 3335, 4326, 4329, 4336, STAT 3320. By completing 3 of these electives, you may be eligible for a Mathematics minor; interested students should consult the Department of Mathematics.
4. Approved courses are: PHYS 2325, PHYS 3351, PHYS 4348, or any course listed in NOTE 3 (not already taken). **from MATH 3323, 3335, 4326, 4329, 4336, and STAT 3320.**
5. Must take three classes from any single aerospace concentration
6. Must be a class from a different concentration area

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 Program advisor: Iliana Solis, [itrevino2@utep.edu](mailto:itrevino2@utep.edu) Lower-division Level advisor: Evelyn Torres, [etorres28@utep.edu](mailto:etorres28@utep.edu)  
 Lower-division Level advisor: Turner, Ian M, [imturner@utep.edu](mailto:imturner@utep.edu)

Revised by Dr. Methaq Abed on September 6, 2022