

Student Name:

Updated:

**B.S. in AEROSPACE ENGINEERING
(Astronautics Concentration)**

Suggested 4-Year Academic Flowchart

Updated By:

This document displays only your course requirements
at the time of publication of the catalog.
You must use your Degree Progress Report
to track all your graduation requirements.

2022-2026 Catalog

Updated 5/5/2022

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Aerospace Fundamentals AERO 121 (2)	General Chemistry for Physical Science & Engineering I CHEM 124 (4) * [B1 & B3]		Introduction to Aerospace Design AERO 215 (2) (AERO 121; MATH 143. Recom: IME 144)	Mechanics of Materials I CE 204 (3)[†] (ME 211)	Mechanics of Materials II CE 207 (2)[†] (CE 204)	Aerospace Fluid Mechanics AERO 302 (4) (ME 212; AERO 300 [†] . Recom: AERO 215; 299 or 301)	Aerospace Gas Dynamics and Heat Transfer AERO 303 (4) (AERO 299 or 301; 302)	Aerospace Structural Analysis II AERO 431 (4) (AERO 331)	Experimental Stress Analysis AERO 433 (1) (AERO 331; 431)	Aerospace Systems Senior Laboratory AERO 465 (1) (AERO 303; 320; 431; Sr Standing)	
Calculus I MATH 141 (4) * [B4]	Calculus II MATH 142 (4) (MATH 141 w/min C- or Instr. Consent) [B4]	Calculus III MATH 143 (4) (MATH 142 w/min C- or Instr. Consent) [Area B Elective]	Calculus IV MATH 241 (4) (MATH 143)	Aerospace Systems Engineering & Integration AERO 220 (1) (AERO 121)	Aerospace Thermodynamics AERO 299 (4) (ME 212; AERO 300 [†] . Recom: AERO 215)	Fundamentals of Dynamics and Control AERO 320 (4) (AERO 300; ME 212)	Aerospace Structural Analysis I AERO 331 (4) (AERO 300; CE 207 or 208; ME 212)	Spacecraft Attitude Dynamics & Control AERO 421 (4) (AERO 320; 351)	Aerospace Engineering Professional Preparation AERO 460 (1) (Sr Standing)		
	General Physics I PHYS 141 (4) * [Area B Elective]	General Physics II PHYS 142 (4) (PHYS 141; MATH 142 or 182)	General Physics III PHYS 143 (4) (MATH 142; PHYS 141. Recom: MATH 241)	Materials Engineering MATE 210 (3) (CHEM 111, 124, or 127. Recom: concur MATE 215)	Aerospace Engineering Analysis AERO 300 (5) (AERO 215; MATH 244; ME 211; PHYS 133)	Experimental Sensors, Actuators & Control AERO 321 (1) (AERO 300. Recom: EE 201 & 251)	Fundamentals of Systems Engineering AERO 350 (2) (AERO 220)	Spacecraft Electrical & Electric Systems AERO 446 (4) (ME 212; EE 201 & 251; AERO 353 or 355)	Spacecraft Design I AERO 447 (3) (IME 144; AERO 215; 303; 350; 351; 420 or 421; 431; 446, 402 [†] . Recom: 353/355)	Spacecraft Design II AERO 448 (3) (AERO 447)	Spacecraft Design III AERO 449 (3) (AERO 448)
Introduction to Design & Manufacturing IME 144 (4)			Engineering Statics ME 211 (3) (MATH 241 [†] ; PHYS 131 or 141)	Engineering Dynamics ME 212 (3) (MATH 241; ME 211 or ARCE 211)	Electric Circuit Theory & Lab EE 201 (3) (MATH 244; PHYS 143) & EE 251 (1)	Statistical Methods for Engineers STAT 312 (4) * [Upper-Division B]	Space Environments I AERO 355 (3) (AERO 300)	Space Environments II AERO 356 (3) (AERO 299 or 301; 355)	Spacecraft Propulsion Systems AERO 402 (5) (AERO 303; AERO 353 or AERO 355; CHEM 124)	Astronautics Approved Electives (4) [‡]	Astronautics Approved Electives (4) [‡]
GE (4) **		GE (4) **		Linear Analysis I MATH 244 (4) (MATH 143)		Introduction to Orbital Mechanics AERO 351 (4) (AERO 300; ME 212)	GE (4) **		GE (4) **	GE (4) **	GE (4) **
Oral Communication COMS 101/102 (4)** [A1]			GE (4) **			Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)			GE (4) **		
Expository Writing ENGL 133/134 (4)** [A2]											
Reasoning, Argumentation, & Writing [A3] COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGQS 145 (4)** (Completion of GE A2 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.											
18	16	16	17	14	15	17	17	15	14	16	15
										TOTAL:	190

Notes:

MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

* Refer to current catalog for prerequisites.

**One course from each of the following GE areas must be completed: A1, A2, A3, B2, C1, C2, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, Lower-Division E, and F. Upper-Division C should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

[†]Course can be taken previously or concurrently.

¹ CE 204 & 207 can be replaced by taking 208

² Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of postbaccalaureate studies and/or goals. Only 4 units of 300-level coursework is allowed as an approved elective.

Legend:

Course Title	Major (49)
Course # (Units)	Support (53)
(Prerequisite)	Concentration (40)
[GE Area]	General Ed. (48)