

AEROSPACE ENGINEERING											2020-2021				
Cr. Hrs.	SEM 1	Cr. Hrs.	SEM 2	Cr. Hrs.	SEM 3	Cr. Hrs.	SEM 4	Cr. Hrs.	SEM 5	Cr. Hrs.	SEM 6	Cr. Hrs.	SEM 7	Cr. Hrs.	SEM 8
4	MATH 1220 or 1700 Calculus I	4	MATH 1230 or 1710 Calculus II	4	MATH 2720 Multi-Variable Calculus	4	MATH 3740 Differential Equations	4	AE 3610 Aerodynamics I (L) (F)	3	AE 3710 Aerodynamics II (Sp)	3	AE 4600 Aircraft Stability & Control (F)	3	AE 4690 Aircraft Design (Sp)
	MATH 1180 ≥ C or placement		MATH 1220 or 1700 ≥ C		MATH 1230 or 1710 ≥ C		MATH 2720 ≥ C		MATH 2720 ≥ C PHYS 2050+2060 ≥ C AE 2610 or ME 3560 ≥ C		AE 3610 ≥ C MATH 3740 ≥ C ME 2580 ≥ C		AE 3710 ≥ C ME 3600 ≥ C		AE 4600 ≥ C AE 3800 ≥ C
3+1	CHEM 1100+1110 Chemistry I (L)	4+1	PHYS 2050+2060 University Physics I (L)	4+1	PHYS 2070+2080 University Physics II (L) (F, Sp, Su2)	3	ME 2570 Mechanics of Materials (F, Sp)	3	ME 3600 Control Systems (F, Sp, Su1)	3	AE 3800 Flight Vehicle Performance (Sp)	3	AE 4630 Aircraft Structural Design (F)	3	AE 4760 Aerospace Propulsion II
	MATH 1110 ≥ C or placement		MATH 1220 or 1700 ≥ C MATH 1230 or 1710 ≥ C or taking concurrently		PHYS 2050 ≥ C MATH 1230 or 1710 ≥ C		ME 2560 ≥ C		ME 2580 ≥ C MATH 3740 ≥ C ECE 2100 ≥ C		AE 3710 ≥ C or taking concurrently		ME 2570 ≥ C		AE 4660 ≥ C
3	EDMM 1420 Engineering Graphics (L) (F, Sp)	3	AE 2610 Intro to Aerospace Engineering (F, Sp)	3	ME 2320 Thermodynamics I (F, Sp, Su1)	4	ECE 2100 Circuit Analysis I (L) (F, Sp, Su1)	3	ME 3620 Theory of Engineering Experimentation (F, Sp)	3	ME 3350 Instrumentation (L) (F, Sp, Su1)	3	AE 4660 Aerospace Propulsion I (F)	3	AE 4800 Aero Engineering Project (L) (F, Sp)
			PHYS 2050 + 2060 ≥ C or taking concurrently		MATH 1230 or 1710 ≥ C PHYS 2050/2060 ≥ C		MATH 1230 or 1710 ≥ C		MATH 1230 or 1710 ≥ C CS 1060 or CS 1022 or CS 1023 or CS 1110 or CS 1200 ≥ C		ME 2570 ≥ C ME 3620 ≥ C ECE 2100 ≥ C Writing Requirement ≥ C		ME 2320 ≥ C ME 3560 or AE 3710 ≥ C		AE 4790 ≥ C
3	IEE 1020 Technical Communication (F, Sp, Su1 or Su2)	3	CS 1200 Programming in C for Engineers (L) (F, Sp)	3	ME 2560 Statics (F, Sp, Su1)	3	ME 2580 Dynamics (F, Sp, Su1)	3	WES Level II World Language & Culture	3	AE 4700 Orbital Mechanics (Sp)	3	Aerospace Elective (See page 2)	3	Aerospace Elective (See page 2)
	ENGL 1000 ≥ C or placement		MATH 1180 ≥ C or taking concurrently		MATH 1230 or 1710 ≥ C PHYS 2050/2060 ≥ C		ME 2560 or 2530 ≥ C PHYS 2050/2060 ≥ C				ME 2580 ≥ C		ME 2580 ≥ C		
2	WES Level I Inquiry & Engagement	3	WES Level II Societies & Cultures*	3	WES Level II Personal Wellness	3	CHEM 1120 Chemistry II	3	WES Level II Artistic Theory & Practice	4	WES Level III Global Perspectives	1	AE 4790 Aero Engineering Project planning (F, Sp)	3	Aerospace Elective (See page 2)
							CHEM 1100 and 1110 ≥ C						ME 3350 ≥ C ME 3600 ≥ C AE 3710 ≥ C AE 3800 ≥ C		
						4	PHYS 3090 Introductory Modern Physics								
							PHYS 2070 ≥ C MATH 2300 or 2720 ≥ C								
	16 hours		18 hours		18 hours		17-18 hours		16 hours		16 hours		13 hours		15 hours
															128 hours total

NOTES: Prerequisite courses are shown in smaller print.

*Societies and Cultures in level II is a prereq to Local and National Perspectives and Global Perspectives in level III

50 Cr. Pre-Engineering Req. 56 Cr. AE Req. 14 Cr. WES Req. 9 Cr. AE Elective Req.

A 'C' or better is required for admission to upper level CEAS courses

AEROSPACE ENGINEERING ELECTIVES--SELECT THREE OF THE FOLLOWING

Thermal/Fluid Science									
3	AE 5200 Advanced Aerodynamics	3	ME 4310 Heat Transfer	3	ME 4320 Thermodynamics II	3	ME 5300 Theoretical & Computational Fluids	3	ME 5450 Computational Fluid Dynamics I
	AE 3710 ≥ B		ME 2320 ≥ C		ME 2320 ≥ C		ME 3560 or AE 3710 ≥ B		ME 3560 or AE 3710 ≥ B
			ME 3560 or AE 3710 ≥ C		ME 3560 or AE 3710 ≥ C or taking concurrently				CS 2010 ≥ B

Structures/Material Science							
3	AE 5100 Foundations of Structural Mechanics	3	ME 4570 Experimental Solid Mechanics	3	ME 5610 Finite Element Method	3	ME 5690 Principles of Fatigue & Fracture
	AE 4630 ≥ B		ME 3350 ≥ C		ME 2570 ≥ B		ME 3650 or AE 4630 ≥ B
			ME 3650 or AE 4630 ≥ C		ME 3560 ≥ B		
					ME 4310 ≥ B		
					MATH 3740 ≥ B		

Flight Dynamics & Control									
3	AE 4590 Flight Test Engineering & Design	3	AE 5400 Aerospace Vehicle Dynamics	3	ME 4710 Motion & Control	3	ME 5410 Continuous System Modeling & Simulation	3	ME 5430 Mechanical Systems Control
	AE 4600 ≥ C		ME 2580 ≥ B		ME 3600 ≥ C		ME 3600 ≥ B		ME 3600 ≥ B
			ME 3600 ≥ B						

System/Component Design		
3	ME 3650 Machine Design	
	EDMM 1420 ≥ C	
	ME 2570 ≥ C	
	ME 2580 ≥ C	
	ME or AE 2500 ≥ C	
	ME 2615 or AE 2610 ≥ C	