

B.S. in Aerospace Engineering

Astronautics Option

Freshman Year

Fall		Credits
CHM 113	General Chemistry for Engineering	3
COM 122	English Composition	3
	Humanities or Social Science Lower-Level or Upper-Level Elective	3
EGR 101	Introduction to Engineering	2
MA 241	Calculus and Analytical Geometry I	4
UNIV 101	College Success	(1)
Credits Subtotal		15.0
Spring		
EC 225	Engineering Economics	3
EGR 115	Introduction to Computing for Engineers	3
	Humanities Lower-Level Elective	3
MA 242	Calculus and Analytical Geometry II	4
PS 161	Physics I & II for Engineers	4
Credits Subtotal		17.0

Sophomore Year

Fall		Credits
COM 221	Technical Report Writing (Must earn a C or better to pass COM 221)	3
ES 201	Statics	3
ES 208	Thermodynamics	3
MA 243	Calculus and Analytical Geometry III	4
PS 250	Physics for Engineers III	3
PS 253	Physics Laboratory for Engineers	1
Credits Subtotal		17.0
Spring		
CS 125	Computer Science I	4
EGR 200	Computer Aided Design of Aerospace Systems	3
or EGR 201	Computer Aided Design of Mechanical Systems	
ES 202	Solid Mechanics	3
ES 204	Dynamics	3
MA 345	Differential Equations and Matrix Methods	4
Credits Subtotal		17.0

Junior Year

Fall		Credits
AE 313	Space Mechanics	3
AE 318	Aerospace Structures I	3
EE 335	Electrical Engineering I	2
EE 336	Electrical Engineering I Laboratory	1
ES 206	Fluid Mechanics	3
	Math or Natural Science Upper-Level Elective	3
Credits Subtotal		15.0
Spring		
AE 302	Aerodynamics II	3
AE 324	Experimental Space Sys Engineering	2
AE 326	Experimental Space Systems Engineering Lab	1
CEC 325	Fundamentals of Applied Microcontrollers	3
CEC 326	Fundamentals of Applied Microcontrollers Laboratory	1
EP 394	Space Systems Engineering	3

ES 324	Measurements and Instrumentation	2
ES 325	Measurements and Instrumentation Lab	1
Credits Subtotal		16.0
Senior Year		
Fall		
AE 414	Space Propulsion	3
AE 426	Spacecraft Attitude Dynamics	3
AE 427	Spacecraft Preliminary Design	4
or AE 420	Aircraft Preliminary Design	
COM 420	Advanced Technical Communication I	1
ES 320	Engineering Materials Science	2
ES 321	Engineering Materials Science Laboratory	1
	Technical Electives	3
Credits Subtotal		17.0
Spring		
AE 430	Control System Analysis and Design	3
AE 445	Spacecraft Detail Design	4
COM 430	Advanced Technical Communication II	2
HU 330	Values and Ethics (OR HU/SS Upper-Level Study Abroad)	3
or HU 335	Technology and Modern Civilization	
	Technical Electives	3
Credits Subtotal		15.0
Credits Total:		129.0