"Ralphie" Curriculum Guide
ODD SID

Year 1 Fall

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
APPM 1350 or MATH 1300	Calculus I for Engineers	4	Requires placement
ASEN 1403, GEEN 1400, ECEN 1400*	Engineering Projects	3	(PR or CR) APPM 1350
PHYS 1110*	General Physics I	4	(PR or CR) APPM 1350
COEN 1500	Special Topics (Engineering First-Year Seminar)	1	
	Humanities/Social Science Or College- Approved Writing Course	3	
Total Credits: 15			

Year 1 Spring

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
APPM 1360 or MATH 2300	Calculus II for Engineers	4	(PR) APPM 1350
ASEN 1030*	Introduction to Computing for Aerospace Engineering	3	(PR or CR) AAPM 1340, 1345, or 1350
MCEN 1024*	Chemistry for Energy and Materials Science	3	
	Humanities & Social Science Or College-Approved Writing Course	3	
	Humanities & Social Science	3	
Total Credits: 16			

*Physics 1, Computing, Chemistry, and Engineering Projects can be taken either Fall or Spring Term.

Year 2 Fall

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
APPM 2360 or MATH 3430 & MATH 2130	Intro Diff Equations w/ Linear Algebra	4/6	(PR) APPM 1360
ASEN 2401	Statics	3	(PR) APPM 1360; PHYS 1110
ASEN 2501	Introduction to Astronautics	3	(PR) APPM 1360; PHYS 1110; ASEN 1030
PHYS 1120	General Physics II	4	(PR) PHYS 1110; (PR or CR) APPM 1360
	Humanities & Social Science	3	
Total Credits: 17-19			

Year 2 Spring

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
APPM 2350 or MATH 2400	Calculus III for Engineers	4/5	(PR) APPM 1360
ASEN 2403	Dynamics	3	(PR) ASEN 2401; ASEN 1030; (PR or CR) APPM 2360
ASEN 2502	Introduction to Aeronautics	3	(PR) APPM 1360; ASEN 1030; PHYS 1110

ASEN 2402	Thermodynamics	3	(PR) APPM 1360; PHYS 1110 (Recommended PR or CR); MCEN 1024
	Free Elective	3	
Total Credits: 16/17			

Year 3 Fall

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
ASEN 3401	Aerospace Structures	3	(PR) ASEN 2401 (Recommended PR); APPM 2350; APPM 2360
ASEN 3404	Aerospace Dynamics & Control	3	(PR) ASEN 2403; APPM 2350
ASEN 3502	Aerospace Computational Methods	3	(PR) ASEN 2402; ASEN 2403; APPM 2350; APPM 2360 (Recommended PR); ASEN 2501; ASEN 2502
ASEN 3503	Aerospace Electronics	3	(PR) ASEN 2403; APPM 2360; PHYS 1120
	Math and Science Elective	3	
	Humanities & Social Science	3	
Total Credits: 18			

Year 3 Spring

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
ASEN 3402	Aerospace Heat Transfer	3	(PR) ASEN 2402; APPM 2360 (PR or CR); APPM 2350
ASEN 3403	Aerodynamics	3	(PR) ASEN 2402; APPM 2350; APPM 2360
ASEN 3501	Aerospace Experimental Methods	3	PR) ASEN 2402; ASEN 2403; APPM 2350, APPM 2360 (Recommended PR) ASEN 2501; ASEN 2502
ASEN 3405 OR 3406	Astrodynamics or Aircraft Dynamics[6]	3	(PR) ASEN 2501; (PR or CR) ASEN 3404 (PR) ASEN 2502; ASEN 3404
	Technical Elective	3	
Total Credits: 15			

Year 4 Fall

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
ASEN 4013	Foundations of Propulsion	3	(PR) ASEN 3403; MCEN 1024
ASEN 4018	Senior Projects I: Design Synthesis	4	(PR) All 2000 level ASEN courses; ASEN 3501 or ASEN 3502; Three of (ASEN 3401 or ASEN 3402 or ASEN 3403 or ASEN 3404 or ASEN 3503)
	Technical Elective[5]	3	
	College-Approved Writing Course Or Humanities & Social Science	3	
	Aerospace Engineering Elective	3	
Total Credits: 16			

Year 4 Spring

Course Code	Course Name	Credits	Prerequisites (PR) & Corequisites (CR)
ASEN 4028	Senior Projects II: Design Practicum	4	(PR) ASEN 4018
	Aerospace Elective	3	
	Technical Elective[5]	3	
	Technical Elective[5]	3	
	Free Elective	3	
Total Credits: 16			

Notes:

1. Courses from approved Humanities, Social Sciences and Writing Requirements (https://www.colorado.edu/engineering-advising/get-your-degree/degree-requirements/humanities-social-sciences-and-writing-requirements/).
2. Students may elect to apply this course towards free elective or Humanities and Social Sciences credits
3. A full listing of approved math and science elective courses can be found in the degree audit.
4. Any ASEN course at the 4000-level or above that is not a required course can be used to satisfy the Aerospace Engineering Elective requirement. Additionally, for Astronautics Focus students, either ASEN 3406 or ASEN 4402 can be used to satisfy the Aerospace Engineering Elective requirement, while for Aeronautics Focus students, either ASEN 3405 or ASEN 4401 can be used to satisfy the Aerospace Engineering Elective requirement.
5. A technical elective is generally a course in math, engineering, or science at the 3000 level or above. Any ASEN course at the4000 level or above that is not a required course can be used as a technical elective. Upper-division independent study courses from technical areas (math, science and engineering) are acceptable for up to 6 credit hours of technical elective credit. A full listing of approved technical elective courses can be found in the degree audit.