

RECOMMENDED ENGR MECH WITH AEROSPACE ENGINEERING OPTION CURRICULUM FLOWCHART

Effective for Students Entering EMA Fall 2025 or later

Semesters							
Fall 1	Spring 1	Fall 2	Spring 2	Fall 3	Spring 3	Fall 4	Spring 4
3 Comm A	3 EMA 201 Statics (Math 222 or concur)	B 3 EMA 202 Dynamics (EMA 201)	B 3 EMA 303 Mechanics of Materials (EMA 201)	3 EMA 506(F) Adv Mech of Materials (EMA 303)	3 EMA 545 (S) Vibrations (EMA 202)	3 EMA 469(F) Design Prob in Engr (EMA 303)	3 EMA 569(S) Senior Design Project (EMA 469)
		5 Physics 202 Gen Physics (EMA 201)	1 EMA 307 Mechanics Lab (EMA 303 or concur)	3 EMA 542 (F) Adv Dynamics/ (EMA 202)		C 3 EMA 521(F) Aerodynamics (Math 321, EMA 202 & ME 363)	E 3 Spacecraft & Structural Dynamics
		4 CS 220 Data Science Programming	3 ME 361 Thermodynamics (Chem 103 & EMA 201)	3 ME 363 Fluid Dynamics (ME 361 & Math 320)	3 ME 364 Heat Transfer (ME 363 or concur)	D 3 Experimental Mechanics	3 EMA 524(F) Rocket Prop/ EMA 523(S) Flight Dyn (ME 363)/ (EMA 521 & 542)
5 Math 221 Calculus	4 Math 222 Calculus & Analytic Geometry (Math 221)	4 Math 234 Multi-Var Calculus (Math 222)	3 Math 320 Linear Algebra & Diff Eqns (Math 222)	3 Math 321 Applied Math Analysis (Math 234 & 320)			
A 5 Chem 109 Gen Chem	3 ME 231 Graphics		3 Stats 324 Statistics (Math 221)	3 EMA 405 Finite Elements (EMA 303)	3 EMA 471 Intermediate Problem Solving (CS 220 & Math 320)	3 ME 446(F)/ECE 332 Control Systems (EMA 545 & Math 320)/ (ECE 330)	2 Tech elective
	3 Liberal studies			3 Tech elective	3-4 ECE 376(S)/Phys 321 (F)/ECE 230 Circuits (Physics 202)		
3 EMA 200(F)/ME 201 Intro to Mech & Aerospace	3 Liberal studies	2 InterEgr 275 Public Speaking (Soph standing)	3 Liberal studies		3 InterEgr 397 Technical Comm (Junior standing)	3 Liberal studies	3 Liberal studies
16 credits	16 credits	18 credits	16 credits	18 credits	15-16 credits	15 credits	14 credits

Prerequisites are listed in parentheses under each course. Please see next page for additional notes.

Notes:

A: It is recommended that students take Chem 109. However, depending on their high school chemistry experience, students may substitute this with Chem 103 and Chem 104 for a total of 9 credits.

B: After completing EMA 201, students may take EMA 202 and EMA 303 in either order or concurrently.

C: ME 563 may be substituted for EMA 521. Note: ME 563 is typically offered in the spring semester only.

D: EMA 522(S), EMA 540(F), or EMA 611(S).

E: EMA 550(S), EMA 610(S), or EMA 642(S).

(F) = Fall-only course; (S) = Spring-only course

For more details, please visit the Guide website: https://go.wisc.edu/coe_em_aero_reqs