Dual Aerospace/Mechanical Engineering Curriculum Sheet (2025—2026)

UF Mechanical and Aerospace Engineering (MAE) Department, MAEA-219, advising@mae.ufl.edu

Important notes: Your degree audit and the **model semester plan** for your catalog year (Here) take precedence over this curriculum sheet. Each course line below is required and must be satisfied independently. A single course cannot be used to satisfy two lines.

✓	Course	Cr	Course Title and Info	+ When	Prerequisites (No Overrides)
Semester 1					**(15-16 credits)**
	* CHM 2045 *or* CHM 2095	3	General Chemistry 1 *or* Chemistry for Engineers 1 *(GE – P)*	F S Su	CHM1025, MAC1147 *or* MAC1140 *plus* MAC1114 *or* higher MAC course (C or higher in all of these courses)
	§ CHM 2045L	1	General Chemistry Lab 1 *(GE – P)*	F S Su	(same as above)
	* MAC 2311	4	Analytical Geometry & Calculus 1 *(GE – M)*	F S Su	Mathematics Placement Exam (ALEKS)
	§ ENC 1101 *or* ENC 1102	3	Composition *(GE – C)* - [WR-6000]	F S Su	
	§ Quest 1 Course	3	Quest 1: Humanities *(GE – H)*	F S Su	*https://catalog.ufl.edu/course-search/ w/ Quest1 + HUM*
	EML 2920 *or* EGN 2020C	1,2	Dept & Professional Orientation *or* Engineering Design & Society	F S	
Semester 2					**(17 credits)**
	* MAC 2312	4	Analytical Geometry & Calculus 2 *(GE – M)*	F S Su	MAC2311
	* PHY 2048	3	Physics with Calculus 1 *(GE – P)*	F S Su	MAC2311
	§ PHY 2048L/2053L	1	Physics Lab 1 *(GE – P)*	F S Su	
	* EML 2023	3	Computer Aided Graphics & Design *(Laptop required)*	F S Su	
	§ ENC 2256	3	Writing in the Disciplines - Engineering Focused *(GE–C)* [WR-6000]	F S Su	ENC1101 or ENC1102
	COP 2273	3	Python Programming for Engineers	F S Su	MAC2311
Semester 3					**(16 credits)**
	EAS 2011	3	Introduction to Aerospace Engineering	F S	PHY2048
	* MAC 2313	4	Analytical Geometry & Calculus 3 *(GE – M)*	F S Su	MAC2312
	* PHY 2049	3	Physics with Calculus 2 *(GE – P)*	F S Su	MAC2312 & PHY2048
	§ PHY 2049L/2054L	1	Physics Lab 2 *(GE – P)*	F S Su	
	COP 2271 *(Lab is optional)*	2	Computer Programming for Engineers **Matlab**	F S Su	MAC2312
	# EGM 2511	3	Engineering Mechanics - Statics	F S Su	PHY2048
Semester 4					**(17 credits)**
	EMA 3010	3	Materials	F S Su	CHM2045
	EML 2322L	2	Design & Manufacturing Lab	F S Su	EML2023, AE/ME majors only
	* MAP 2302	3	Elementary Differential Equations	F S Su	MAC2312
	# EGM 3344	3	Intro to Numerical Methods of Eng. Analysis	F S	MAC2313 & COP2271-**Matlab**
	# EGM 3520	3	Mechanics of Materials	F S Su	EGM2511 & MAC2313
	# EML 3100	3	Thermodynamics	F S Su	CHM2045, MAC2313, PHY2048
Semester 5					**(18 credits)**
	EEL 3003 or EEL 3111C	3	Elements Electrical Engineering *or* Circuits 1	F S Su	MAC2313 & PHY2049
	§ Quest 2	3	Quest 2: Gen Ed Biological Sciences *(GE-B)* or Physical Sciences *(GE-P) only*	F S Su	*https://catalog.ufl.edu/course-search/ w/ Quest2 + (PHYSSCI or BIOSCI)*
	# EGM 3401	3	Engineering Mechanics - Dynamics	F S	EGM2511 & MAC2313
	EAS 4101	3	Aerodynamics	F S	EAS2011 or EGN3353C, COP2271, MAC2313, EML3100, MAP2302
	MAP 4305 or MAP 5304	3	Differential Equations for Engineers	F S Su	MAP2302, EGM3344
	EML 3301C	3	Mechanics of Materials Lab - [WR-6000]	F S	EMA3010, COP2271, EGM3520, ENC2256
Semester 6					**(15 credits)**
	§ GE – SS	3	Gen. Ed. Social & Behavioral Sciences – [WR-6000]	F S Su	*https://catalog.ufl.edu/course-search/ w/ SOCSCI + 6000*

	EAS 4132 *or* EML 5714	3	Compressible Flow	F S	EAS4101 or EGN3353C
	EAS 4510	3	Astrodynamics	F S	EGM3401, (MAP4305 or MAP5304)
	EML 4312	3	Control of Dynamic Systems	F S	EGM3401, EGM3344, MAP2302
	EML 3005	3	Mechanical Engineering Design 1	F S	COP2271, EGM3520, EML2322L, EGM3401
Semester 7					**(15 credits)**
	EAS 4200	3	Aerospace Structures	TBD	EGM3520
	EAS 4400	3	Stability and Control of Aircraft	F S	EAS4101, EML4312
	EAS 4810C	3	Aerospace Sciences Lab and Design	F S	EAS4101, EAS4132, EML3301C
	§ State Core GE – H	3	State Core Gen Ed Humanities (*list in Degree Audit*)	F S Su	See also: Here
	EML 4220	3	Vibrations	F S	EGM3401, EGM3520, EGM3344, MAP2302
Semester 8					**(15 credits)**
	EAS 4300	3	Aerospace Propulsion	F S	EAS4132
	§ State Core GE – SS	3	State Core Gen Ed Social & Behavioral (*list is in Degree Audit*)	F S Su	See also: Here
	Choose one:	3	Capstone Design Course		
	EAS 4700		Aero Design 1	F	EAS4510, EML4312, EGM3520
	EAS 4710		Aero Design 2	S	EAS4400, EAS4101, EGM3520
	EML 4140	3	Heat Transfer	F S	EAS4101 & MAP2302
	EML 4507	3	Finite Element Analysis & Design	F S	MAP2302, EGM3520, EGM3344
Semester 9					**(12 credits)**
	EML 4147C	3	Thermal Systems Design & Lab	F S	EML3100, EML3301C, EML4140
	EML 4321	3	Manufacturing Engineering	F S	EMA3010, EML2322L & EML3005
	EML 4314C	3	Dynamics & Controls System Design Lab	F S	EML3301C & EML4312
	Choose one:	3	Realization Course		
	EML 4502		Mechanical Eng Design 3	F S Su	EAS4700 or EAS4710
	EML 4535C		Automation in Production Engineering	TBD	(ask advisor)
	EML 4914		Undergraduate Realization Thesis	-	EAS4700 or EAS4710
	EML 4842		Autonomous Vehicles	TBD	COP 2273 *or* COP 2271
	EAS 4700 *or* EAS 4710		Remaining Capstone Design Course from Semester 8	-	*See Semester 8.*
AE/ME Dual Program Total					**(140 credits)**

+: **Projected Terms**. Terms are projected by best effort and could change. Review updated Schedule of Courses once published.

*: **Critical Tracking (CT)**. Eight MAE CT courses function as a barometer of future success in the major. Students must earn a C or better within two attempts of each CT course, including drops, by end of CT semester five, typically Fall of the Junior year. Students must earn the required grade to use a course as a prerequisite. Students who do not pass a CT course upon first attempt are placed on probation. Per MAE policy, a second attempt cannot be transient. Note: *Change of Major is Necessary Under Any of the Following Circumstances*--second unsuccessful CT attempt; repeat of three CT courses; unsuccessful completion of all eight CT courses within first five CT semesters; completion of all eight CT courses below a 2.80 GPA. Changing majors within the first five semesters is feasible and offers the best opportunity for success in an alternate major. Change of major after CT5 is rare. Additional notes: **Grade forgiveness** occurs in the calculation of CT GPA (only GPA with this feature). Students may use "pass by exam" for a first course as a prerequisite; however, once the second course is passed, credit cannot be gained for retaking the first course in an effort to boost CT GPA.

#: **Five MAE Core Courses**. Each MAE core course requires a C or better, which is needed before the course can serve as a prerequisite. Unlimited attempts of core courses (or any non-critical tracking course) are permitted; however, students must maintain at least a 2.00 GPA.

§: **General Education Courses**. Incoming students w/out an articulated AA degree must satisfy UF Gen. Ed. requirements. Each course requires a C or better. Additionally, students must complete the three-hour GE-N "International" requirement, which must be earned concurrently with another area. For example, a course designated as Humanities/International can count toward both the Humanities and International requirements. Go: https://catalog.ufl.edu/course-search/; select desired Gen. Ed. category in the dropdown menu to find courses; select desired Quest level if appropriate.

WR: **Writing Requirement.** The above plan satisfies completion of a total of 24,000 words. Writing course grades assigned by the instructor have two components: the writing component and a course grade. To receive writing credit, students must satisfactorily complete the writing component and earn a C or better. It is possible to earn a C in a class and fail to meet the Writing Requirement, so students should review their degree audit to verify receipt of credit for the writing component.

ver: 08/20/25