~ DUAL Aerospace & Mechanical Engineering Degree Curriculum ~
Bachelors of Science in Mechanical Engineering & Aerospace Engineering

Although this is a **suggested** outline, **all** courses listed below are **REQUIRED** for this degree. Refer to the Undergraduate Catalog for verification.
In the event of conflicting information, the Degree Audit and UF Catalog supersede any information provided on this sheet.

Critical tracking courses: MAC 2311, MAC 2312, MAC 2313, MAP 2302, PHY 2048, PHY 2049, CHM 2045 & EML 2023 must be completed by semester 5, not including summer terms. A 2.8 GPA is required for these 8 courses. A "C" or better must be earned in each course. Students have 2 attempts at each course, including drops.
YOU MUST COMPLETE ALL 8 CRITICAL TRACKING COURSES BEFORE YOU CAN APPLY FOR THE DUAL DEGREE PROGRAM. Read the application COMPLETELY to find all other requirements you must meet before you are allowed to apply for a dual degree.

Courses highlighted below and listed with an **asterisk (*)** - *(critical tracking course)* or **pound (#)** - *(MAE Core)* **require a grade of C or better.** All others require a D minus or better (i.e. a passing grade). Critical tracking must be completed within 2 attempts. All others have no limit.

Each line below must be satisfied independently. One course cannot be used for two different requirements.

Students must complete general education **international** and **diversity** requirements. This is often done while completing another general education requirement, typically humanities or social and behavioral sciences.
Students must complete unique **State Core** general education requirements. Refer to your Degree Audit or the UF Catalog for the lists of acceptable courses.

✔	Course Prefix and Number	Cr	Course Title and Info	Projected Offer	Pre-Requisites (REQUIRED = NO OVERRIDES)
	Semester 1 (15cr)				
	CHM 2045/2095 *	3	General Chemistry 1 / Chemistry for Engineers 1 *(GE – P)*	F S Su	CHM 1025 with a C, MAC 1147 *or* MAC 1140 plus MAC 1114 *or* higher MAC course with a C
	CHM 2045L	1	General Chemistry Lab 1 *(GE – P)*	F S Su	CHM 1025 with a C, MAC 1147 *or* MAC 1140 plus MAC 1114 *or* higher MAC course with a C
	MAC 2311 *	4	Analytical Geometry & Calculus 1 *(GE – M)*	F S Su	Mathematics Placement Exam (ALEKS)
	ENC 1101 or ENC 1102	3	(Gen Ed Composition) - [WR-6000]	F S Su	
	Quest 1 Course	3	(GE – H) (*possible Diversity, International, or writing*)	F S Su	All incoming freshmen w/out an AA degree
	EML 2920 *or* EGN 2020C	1	Dept & Professional Orientation *or* Engg Design & Society	F S	
	Semester 2 (17cr)				
	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 3246	3	Professional Communication for Engineers - *(GE–C)* [WR-6000]	F S Su	ENC1101 or ENC1102
	Science Elective *(Pick 1)*	3	CHM2046/2096 BSC2010 □ PHY3101 AST3018/3019	F S Su	*Check catalog*
	Semester 3 (16cr)				
	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** *(no exceptions)*	F S Su	MAC2312
	EGM 2511 #	3	Engineering Mechanics - Statics	F S Su	PHY2048
	Semester 4 (17cr)				
	EMA 3010	3	Materials	F S Su	CHM2045
	EML 2322L	2	Design & Manufacturing Lab	F S Su	EML2023, ENC3246, ASE/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 (18cr)				
	Quest 2	3	(GE – SS) (*possible Diversity, International, or writing*)	F S Su	
	EAS 4101	3	Aerodynamics	F S	EAS 2011, COP 2271, EML 3100, MAC 2313, MAP 2302
	EEL 3003	3	Elements of Electrical Engineering *(can sub-EEL 3111C)*	F S Su	MAC2313 & PHY2049
	EGM 3401 #	3	Engineering Mechanics - Dynamics	F S	EGM2511 & MAC2313
	EML 3301C	3	Mechanics of Materials Lab - [WR-6000]	F S	EMA3010, COP2271, EGM3520, ENC3246
	MAP 4305 or MAP 5304	3	Differential Equations for Engineers and Physical Scientists	F S Su	MAP2302 & (MAS3111 or MAS4105 or EGM3344)

Semester 6 (15cr)				
State Core GE – SS	3	State Core Gen Ed Social & Behavioral (*list is in Degree Audit*)	F S Su	
EML 3005	3	Mechanical Engineering Design 1	F S	COP2271, EGM3520, EML2322L, EGM3401
EAS 4132 or EML 5714	3	Compressible Flow	F S	EAS4101
EAS 4510	3	Astrodynamics	F S	EGM3401 & (MAP4305 or MAP5304)
EML 4312	3	Control of Dynamic Systems	F S	EGM3401, EGM3344, MAP2302
Semester 7 (15cr)				
EAS 4200	3	Aerospace Structures	**F**	EGM3520
State Core GE – H	3	State Core Gen Ed Humanities (*list in Degree Audit*)	F S Su	
EML 4220	3	Vibrations	F S	EGM3401, EGM3520, EGM3344, MAP2302
EAS 4400	3	Stability and Control of Aircraft	F S	EAS 4101 & EML 4312
EAS 4810C	3	Aerospace Sciences Lab and Design	F S	EAS4101, EAS4132, EML3301C
Semester 8 (15cr)				
EAS 4300	3	Aerospace Propulsion	F S	EAS4132
EML 4140	3	Heat Transfer	F S	EAS4101 & MAP2302
GE – H or GE – SS	3	Humanities or Social & Behavioral Sciences - [WR-6000]	F S Su	
Δ EAS 4700 *OR* Δ EAS 4710	3	Δ Aerospace Design 1 *OR* Aerospace Design 2	**F** **S**	Δ EAS 4510 and EML 4312 Δ EAS 4101 and EAS 4400
EML 4507	3	Finite Element Analysis & Design	F S	COP2271, EGM3520, EGM3344
Semester 9 (12cr)				
EML 4147C	3	Thermal Systems Design & Lab	F S Su	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
EML 4502	3	Mechanical Engineering Design 3	F S	EML4501 or EAS4700 or EAS4710
Total Hours	**140**			

- **Each** line requirement above must be met in order to meet the 140 credit hours of dual ME/ASE degree requirements.
- One single course **cannot** count for more than one line above. For example, you may **not** use BSC2010 as a science elective and also a technical elective; it will only count for one requirement.
- Pre-requisites must be met in order to take a course. **No exceptions**.
- The Degree Audit and UF Catalog supersede the information in this document. **When in doubt, follow your Degree Audit.**