

~ 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.

Pre-professional 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 PRE-PROFESSIONAL TRACKING COURSES BEFORE YOU CAN APPLY FOR THE DUAL DEGREE PROGRAM.

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

Every line below must be satisfied independently. One course cannot be used for two lines; for instance, a course **cannot** count as a technical elective **AND** a specialization elective simultaneously.

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 (<i>GE - P</i>)	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 (<i>GE - P</i>)	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 (<i>GE - M</i>)	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	(<i>GE - H</i>) (<i>possible Diversity, International, or writing</i>)	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 (<i>GE - M</i>)	F S Su	MAC2311
	PHY 2048 *	3	Physics with Calculus 1 (<i>GE - P</i>)	F S Su	MAC2311
	PHY 2048L/2053L	1	Physics Lab 1 (<i>GE - P</i>)	F S Su	
	EML 2023 *	3	Computer Aided Graphics & Design (<i>Laptop required</i>)	F S Su	
	ENC 3246	3	Professional Communication for Engineers - (<i>GE-C</i>) [WR-6000]	F S Su	ENC1101 or ENC1102
	Science Elective (<i>Pick 1</i>)	3	☐ CHM2046/2096 ☐ BSC2010 ☐ PHY3101 ☐ AST3018/3019	F S Su	<i>Check catalog</i>
Semester 3 (16cr)					
	EAS 2011	3	Introduction to Aerospace Engineering	F S	PHY2048
	MAC 2313 *	4	Analytical Geometry & Calculus 3 (<i>GE - M</i>)	F S Su	MAC2312
	PHY 2049 *	3	Physics with Calculus 2 (<i>GE - P</i>)	F S Su	MAC2312 & PHY2048
	PHY 2049L/2054L	1	Physics Lab 2 (<i>GE - P</i>)	F S Su	
	COP 2271 (<i>Lab is optional</i>)	2	Computer Programming for Engineers Matlab (<i>no exceptions</i>)	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	(<i>GE - SS</i>) (<i>possible Diversity, International, or writing</i>)	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 (<i>can sub-EEL 3111C</i>)	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 (<i>list is in Degree Audit</i>)	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	Astroynamics	F S		EGM3401 & (MAP4305 or MAP5304)
EML 4312	3	Control of Mechanical Eng. 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 (<i>list in Degree Audit</i>)	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		
<input type="checkbox"/> EAS 4700 <i>OR</i>	3	<input type="checkbox"/> Aerospace Design 1 <i>OR</i>	F	S	<input type="checkbox"/> EAS 4510 and EML 4312
<input type="checkbox"/> EAS 4710		<input type="checkbox"/> Aerospace Design 2			<input type="checkbox"/> 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		EAS4700 or EAS4710
Total Hours		140			

- **Each** line requirement above must be met in order to meet the 140 credit hours of 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.
- 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.