

# DUAL Aerospace-Mechanical Engineering Degree Curriculum ~ (Catalog Year: 2015-2016)

## 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

Student's Name: \_\_\_\_\_ UFID: \_\_\_\_\_ Today's Date: \_\_\_\_\_

You MUST complete all 8 tracking courses before you can **OFFICIAL** apply for the Dual Degree Program. This is a sample curriculum and schedule that illustrates the dual ME-ASE Bachelor of Science degree with a minimum number of additional hours (9 hours in this case for a 137 hour total program). Other combinations of elective courses are also possible, but may require more than 9 additional hours.

①The tracking courses for MAE are: MAC2311, MAC2312, MAC2313, MAP2302, PHY2048, PHY2049, CHM2045 & Sci Elec: (CHM2046, BSC2010, PHY3101 or AST3018/3019) \*asterisk means that they **require a Grade of "C" or better**. ②All undergraduate students (except those transferring to UF with an A.A. degree from a Florida State/Community College or University) are required to satisfy: 15cr-Humanities/Social Science(H/SS); 3cr-Diversity(D); 3cr-International(N). {Some (D/N) courses will double count with H/SS courses, check the undergraduate catalog for further explanation, under "General Education Requirement"}. ③Writing Requirement-24,000 words(WR). ④Summer Requirement-9cr {Must be taken at any State of Florida University not State/Community Colleges}.

Upper Division Courses that have an "#" next to them - **requires a grade of "C" or better**.

✓	Course Prefix and Number	Cr	Course Title	Projected Offer	Pre-Requisites
<b>Semester 1 (15cr)</b>					
	*CHM 2045 or 2095	3	General Chemistry 1 / Chemistry for Engineers 1	F S Su	Chemistry Readiness Assessment
	CHM 2045L	1	General Chemistry Lab 1	F S Su	
	*MAC 2311	4	Analytical Geometry & Calculus 1	F S Su	Mathematics Placement Exam (ALEKS)
	GE – C	3	Composition-[WR] (Ex: ENC1101 or any composition course)	F S Su	ACT/SAT scores do not exempt this requirement
	IUF 1000 (GE – H)	3	What Is The Good Life (Required)	F S Su	All incoming freshmen w/out an AA degree
	EML 2920	1	Departmental & Professional Orientation	F S	
<b>Semester 2 (14cr)</b>					
	*MAC 2312	4	Analytical Geometry & Calculus 2	F S Su	MAC2311
	*PHY 2048	3	Physics with Calculus 1	F S Su	MAC2311
	PHY 2048L or 2053L	1	Physics Lab 1	F S Su	
	EML 2023	3	Computer Aided Graphics & Design (Laptop Req'd)	F S Su	
	ENC 3246 [offered by the Writing Program]	3	Professional Communication for Engineers	F S Su	ENC1101 or test score equivalency
<b>Semester 3(Summer) (9cr)</b>					
	GE – SS	3	Social & Behavioral Sciences (State Core)	F S Su	
	EMA 3010	3	Materials	F S Su	CHM2045
	*Science Elective (Pick 1)	3	☐CHM2046/2096 ☐BSC2010 ☐PHY3101 ☐AST3018/3019	F S Su	Check catalog for Pre-requisites
<b>Semester 4 (15cr)</b>					
	*MAC 2313	4	Analytical Geometry & Calculus 3	F S Su	MAC2312
	*PHY 2049	3	Physics with Calculus 2	F S Su	MAC2312 & PHY2048
	PHY 2049L or 2054L	1	Physics Lab 2	F S Su	
	COP 2271 (Lab is optional) [offered by ISE Dept]	2	Computer Programming for Engineers Matlab No Substitutions-Degree Audits will be updated to reflect this change	F S Su	MAC2312
	EAS 3020C	3	Introduction to Flight (Simultaneously counts as a Technical Elective in BSME)	F S	PHY2048 & MAC2311
	#EGM 2511	3	Engineering Mechanics - Statics	F S Su	PHY2048
<b>Semester 5 (15cr)</b>					
	*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 2322L	2	Design and Manufacturing Laboratory	F S Su	EML2023 & ENC3246 & ASE/ME majors only
	#EML 3100	3	Thermodynamics	F S Su	CHM2045 & MAC2313 & PHY2048
<b>Semester 6 (15cr)</b>					
	EAS 4101	3	Aerodynamics (Simultaneously counts for EGN3353C in BSME)	F	COP2271-Matlab & (EAS3020C or EGN3353C) & EML3100, MAC2313 & MAP2302
	EEL 3003	3	Elements of Electrical Engineering (Approved substitution: EEL3111C - Circuits 1 with Lab)	F S Su	MAC2313 & PHY2049
	#EGM 3401	3	Engineering Mechanics - Dynamics	F S	EGM2511 & MAC2313
	EML 3301C	3	Mechanics of Materials Laboratory	F S Su	EGM3344 & EGM3520 & ENC3246
	MAP 4305 or EGM 4313	3	Differential Equations for Engineers and Physical Scientists	F S Su	C or better in EGM3344

<b>Semester 7</b>		<b>(15cr)</b>			
EAS 4132	3	Compressible Flow <i>(Simultaneously counts for Specialization Elective in BSME)</i>	S	EAS4101 or EGN3353C	
EAS 4510	3	Astrodynamics <i>(Simultaneously counts as a Technical Elective in BSME)</i>	S	EGM3401 & (EGM4313 or MAP4305 or MAP5304)	
EML 4304C	3	Thermo/Fluids Design & Lab <i>(New Title: Aerospace Sciences Design &amp; Lab)</i>	F S Su	(EAS4101 or EGN3353C) & EML3100 & EML3301C	
EML 4312	3	Control of Mechanical Eng. Systems	F S	EGM3401 & EGM3344 & MAP2302	
GE – SS	3	Social and Behavioral Sciences <i>(your choice)</i>	F S Su		
<b>Semester 8</b>		<b>(15cr)</b>			
GE – H	3	Humanities <i>(State Core)</i>	F S Su		
EAS 4200C	3	Aerospace Structures <i>(Simultaneously counts as a Technical Elective in BSME)</i>	F	EGM3520	
EAS 4400	3	Stability and Control of Aircraft	F	EAS4101 & EML4312	
EML 4220	3	Vibrations <i>(Simultaneously counts as a ASE Elective in BSASE)</i>	F S	EGM3401 & EGM3520 & EGM3344 & MAP2302	
EML 3005	3	Mechanical Engineering Design 1 <i>(Simultaneously counts as a Technical Elective in BSASE)</i>	F S	COP2271-Matlab & EGM3520 & EML2322L	
<b>Semester 9</b>		<b>(15cr)</b>			
GE – H or GE – SS	3	Humanities or Social & Behavioral Sciences <i>(Your Choice)</i>	F S Su		
EAS 4300	3	Aerospace Propulsion	S	EAS4101	
EAS 4700 or EAS 4710	3	Aerospace Design 1 or Aerospace Design 2 <i>(Simultaneously counts for EML4501 in BSME)</i>	F S	<i>Check Catalog for Pre-requisites</i>	
EML 4140	3	Heat Transfer <i>(Simultaneously counts as a ASE Elective in BSASE)</i>	F S	(EAS4101 or EGN3353C) & MAP2302	
EML 4507	3	Finite Element Analysis & Design <i>(Simultaneously counts as a Technical Elective in BSASE)</i>	F S	COP2271-Matlab & EGM3520 & EGM3344	
<b>Semester 10</b>		<b>(15cr)</b>			
EML 4147C <i>(Special Note)</i> →	3	Thermal Systems Design & Lab <i>(If you have completed EGN3353C &amp; EAS4101 EML4147C is not required)</i>	F S Su	EML3100 & EML3301C & EML4140	
EML 4321	3	Manufacturing Engineering	F S	EGM3520 & EMA3010 & EML2322L	
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	
<b>Total Hours</b>	<b>140</b>			<i>Revised 4/6/2016</i>	