Aerospace Engineering Four Year Academic Plan

Name:_____ **UID:**_____

Year 1	Fall			Spring		
Gateway requirements include: ENGL 101, CHEM 135, MATH 141, PHYS 161 and an approved Distributive Studies course. (Directly admitted freshman must successfully complete these courses and ENES 100 by 45 UM credits.)	***Course***	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	ENAE 100	1		ENAE 202	3	
	ENES 102	3		ENES 100 (SP)	3	
	MATH 140 (AR)	4		MATH 141	4	
	CHEM 135	3		PHYS 161 (NS)	3	
	ENGL 101 (AW)	3		Hist & Social Sciences(HS)*	3	
	Total	**14**		**Total**	**16**	

Year 2	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	ENES 220	3		ENAE 200	1	
	ENAE 283	3		ENES 232	3	
	MATH 241	4		MATH 240 or MATH 461	4 or 3	
	PHYS 260 and PHYS 261 (NL)	3 & 1		MATH 246	3	
	ORAL COMM (OC)	3		PHYS 270 and PHYS 271	3 & 1	
				Hist & Social Sciences(HS)*	3	
	Total	**17**		**Total**	**17 or 18**	

Year 3	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	ENAE 380	3		ENAE 324	4	
	ENAE 301	3		ENAE 432	3	
	ENAE 311	3		ENAE 404 or ENAE 414	3	
	ENAE 362	3		ENGL 393 (PW)	3	
	Scholarship in Practice (SP)*	3		Humanities (HU)*	3	
	Total	**15**		**Total**	**16**	

Year 4	Fall			Spring		
	Course	***Credit***	***Grade***	***Course***	***Credit***	***Grade***
	ENAE 423	3		ENAE 464	3	
	ENAE 403 or ENAE 441	3		ENAE 482 or ENAE 484	3	
	ENAE 455 or ENAE 457	3		ENAE Elective	3	
	ENAE 481 or ENAE 483	3		Technical Elective	3	
	Humanities (HU)*	3		Gen Ed/Elective**	3	
	Total	**15**		**Total**	**15**	

*All students must complete two Distributive Studies courses that are approved for I-series courses. The Understanding Plural Societies (UP) and Cultural Competence (CC) courses may also fulfill Distributive Studies categories.

** Consult with your advisor regarding the GEN ED/Elective requirement, as the department has final approval.

AEROSPACE ENGINEERING

NAME: _____ UID: _____

General Education Requirements
Fundamental Studies

Requirements	*Course*	*Crd*	*Grd*
Academic Writing (AW)	ENGL 101	3	
Professional Writing (PW)	ENGL 393	3	
Oral Communication (OC)		3	
Math (MA)	----------	0	
Analytic Reasoning (AR)	MATH 140	0	

Distributive Studies

Requirements	*Course*	*Crd*	*Grd*
Natural Science Lab (NL)	PHYS 260&261	0	
Natural Sciences (NS)	PHYS 161	0	
History/Social Sciences (HS)		3	
History/Social Sciences (HS)		3	
Humanities (HU)		3	
Humanities (HU)		3	
Scholarship in Practice (SP)	ENES100	0	
Scholarship in Practice (SP) non major		3	

I-Series
Normally double counted with Distributive Studies

Requirements	*Course*	*Crd*	*Grd*
I-Series (IS)			
I-Series (IS)			

Diversity
(overlap permitted with Distributive Studies and/or I-series)

Requirements	*Course*	*Crd*	*Grd*
Understanding Plural Societies (UP)			
Understanding Plural Societies (UP) or			
Cultural Competency (CC)			

Basic Sciences

Requirements- *The cumulative average of these courses must be a 2.0*	*Crd*	*Grd*
CHEM 135 - Chem for Eng	3	
PHYS 161 - General Physics I	3	
PHYS 260 and PHYS 261 - Gen Physics II & Lab	3&1	
PHYS 270 and PHYS 271 - Gen Physics III & Lab	3&1	
MATH 140 - Calculus I	4	
MATH 141 - Calculus II	4	
MATH 240 or MATH 461 - Linear Algebra	4or3	
MATH 241 - Calculus III	4	
MATH 246 - Differential Equations	3	

Engineering Sciences

Requirements- *The cumulative average of these courses must be a 2.0*	*Crd*	*Grd*
ENES 100 - Intro to Eng Design	3	
ENES 102 - Mechanics I	3	
ENES 220 - Mechanics II	3	

For Degree Clearance Only

Degree: BS ENAE GPA/Credits:_____

Date: _____ Advisor: _____

Major Requirements

The cumulative average of these courses must be a 2.0

Requirements	*Crd*	*Grd*
ENAE 100 - Aerospace Eng Profession	1	
ENAE 200 - Aerospace Eng Profession II	1	
ENAE 202 - Aerospace Computing	3	
ENAE 283 - Intro to Aerospace Systems	3	
ENAE 301 - Dynamics of Aero Systems	3	
ENAE 311 - Aerodynamics I	3	
ENAE 324 - Aerospace Structures	4	
ENAE 362 - Aero Instrumentation & Exp.	3	
ENAE 380 - Flight Software Systems	3	
ENAE 423 - Vibration & Aeroelasticity	3	
ENAE 432 - Control of Aero. Systems	3	
ENAE 464 - Aerospace Eng Lab	3	
ENAE 4XX - Elec.# or ENAE 398H - Honors	3	
#See Department Advisor for appropriate elective		
Choose one of the following tracks:		
Aeronautical Track: ENAE 403, 414, 455, 481 and 482	15	
Space Systems Track: ENAE 404, 441, 457, 483 and 484	15	
Technical Requirements		
ENES232-Thermodynamics	3	
Technical Elective - 4XX**	3	
ENGL 393 - Technical Writing	3	

** Tech elec. must be a 300 or 400 level course outside the department approved by your deptartmental advisor.

Gateway requirements

Requirements	*Crd*	*Grd*
ENGL 101	3	
CHEM 135, 271 or 113	3	
MATH 141	4	
PHYS 161	3	
An approved Distributive Studies course	3	
ENES 100 (required for Freshmen Direct Admits)	3	

Requirements for Graduation:

- ☐ At least 30 credits must be earned at UMD
- ☐ 15 of the final 30 credits must be earned at the 300 - 400 level
- ☐ 12 upper level major credits must be earned at UMD
- ☐ A minimum 2.00 cumulative UM GPA, and satisfactory completion of all degree requires, is required for graduation.
- ☐ Students matriculating in Fall 2012 or after must have a minimum C (2.00) cumulative GPA in ALL courses used to satisfy major degree requirements, minor requirements, and undergraduate certificate requirements. *(Major courses are defined as: departmental courses, basic sciences, engineering sciences, specified degree tracks, technical requirements/technical electives and ENGL 393)*

Students must earn a minimum of 124 credits to complete a degree.