

Aerospace Engineering Four Year Academic Plan

Name: _____

UID: _____

Year 1	Fall		
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
	ENAE 100	1	
	ENES 102	3	
	MATH 140 (AR)	4	
	CHEM 135	3	
	ENGL 101 (AW)	3	
	Total	14	

Spring		
Course	Credit	Grade
ENAE 202	3	
ENES 100 (SP)	3	
MATH 141	4	
PHYS 161 (NS)	3	
Hist & Social Sciences(HS)*	3	
Total	16	

Year 2	Fall		
	Course	Credit	Grade
	ENES 220	3	
	ENAE 283	3	
	MATH 241	4	
	PHYS 260 and PHYS 261 (NL)	3 & 1	
	ORAL COMM (OC)	3	
	Total	17	

Spring		
Course	Credit	Grade
ENAE 200	1	
ENES 232	3	
MATH 240 or MATH 461	4 or 3	
MATH 246	3	
PHYS 270 and PHYS 271	3 & 1	
Hist & Social Sciences(HS)*	3	
Total	17 or 18	

Year 3	Fall		
Second benchmark requirements must be completed one year after students are reviewed for the gateway requirements and include: All 100 and 200 level MATH, PHYS, ENES and ENAE courses.	Course	Credit	Grade
	ENAE 380	3	
	ENAE 301	3	
	ENAE 311	3	
	ENAE 362	3	
	Scholarship in Practice (SP)*	3	
Total	15		

Spring		
Course	Credit	Grade
ENAE 324	4	
ENAE 432	3	
ENAE 404 or ENAE 414	3	
ENGL 393 (PW)	3	
Humanities (HU)*	3	
Total	16	

Year 4	Fall		
Third benchmark requirements must be completed one year after students are reviewed for the second benchmark and include: ENGL393, ENAE432 and ALL required 300 level ENAE courses.	Course	Credit	Grade
	ENAE 423	3	
	ENAE 403 or ENAE 441	3	
	ENAE 455 or ENAE 457	3	
	ENAE 481 or ENAE 483	3	
	Humanities (HU)*	3	
Total	15		

Spring		
Course	Credit	Grade
ENAE 464	3	
ENAE 482 or ENAE 484	3	
ENAE Elective	3	
Technical Elective	3	
Gen Ed/Elective**	3	
Total	15	

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

*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.

AEROSPACE ENGINEERING

NAME: _____

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General Education Requirements Fundamental Studies			
Requirements	Course	Credits	Grade
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	Credits	Grade
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	Credits	Grade
I-Series (IS)			
I-Series (IS)			

Diversity (overlap permitted with Distributive Studies and/or I-series)			
Requirements	Course	Credits	Grade
Understanding Plural Societies (UP)			
Understanding Plural Societies (UP) or Cultural Competency (CC)			

Basic Sciences			
Requirements- <i>The cumulative average of these courses must be a 2.0</i>	Credits	Grade	
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	4 or 3		
MATH 241 - Calculus III	4		
MATH 246 - Differential Equations	3		

Engineering Sciences			
Requirements- <i>The cumulative average of these courses must be a 2.0</i>	Credits	Grade	
ENES 100 - Intro to Eng Design	3		
ENES 102 - Mechanics I	3		
ENES 220 - Mechanics II	3		

Major Requirements		
<i>The cumulative average of these courses must be a 2.0</i>		
Requirements	Credits	Grade
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	
<i>#See Department Advisor for appropriate elective</i>		
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 departmental advisor. MATH 461 cannot be used.

Gateway requirements		
Requirements	Credits	Grade
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	
Benchmark 2 requirements		
MATH 140, 141, 241, 246 and 240 or 461	18-19	
PHYS 161, 260, 261, 270 and 271	11	
ENES 100, 102, and 220	9	
ENAE 100, 200, 202 and 283	8	
Benchmark 3 requirements		
ENGL 393	3	
ENAE 301, 311, 324, 362, 380 and 432	19	

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
- Students must earn a minimum of 124 credits to earn the degree.