

Mechanical 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
	ENES 102	3	
	MATH 140 (AR)	4	
	CHEM 135	3	
	ENGL 101 (AW)	3	
	Total	13	

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

Year 2	Fall		
	Course	Credit	Grade
	ENES 220	3	
	ENES 221	3	
	MATH 241	4	
	MATH 206	1	
	PHYS 260 and PHYS 261 (NL)	3 & 1	
Total	15		

Spring		
Course	Credit	Grade
ENES 232	3	
ENME 272	2	
MATH 246	3	
PHYS 270 and PHYS 271	3 & 1	
Scholarship in Practice (SP)*	3	
Total	15	

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 ENME 271.	Course	Credit	Grade
	ENME 331	3	
	ENME 350	3	
	ENME 382	3	
	ENME 392	3	
	ENME 201 (optional)	1	
	Hist & Social Sciences (HS)*	3	
Total	16		

Spring		
Course	Credit	Grade
ENME 332	3	
ENME 351	3	
ENME 361	3	
ENME 371	3	
ENGL 393 (PW)	3	
Total	15	

Year 4	Fall		
Third benchmark requirements must be completed one year after students are reviewed for the second benchmark and include: ENGL 393, ENME 331, 350, 392 and two of: ENME 351, 361, 371 or 382.	Course	Credit	Grade
	ENME 462	3	
	ENME Tech Elective	3	
	ENME Tech Elective	3	
	Technical Elective	3	
	Humanities (HU)*	3	
Total	15		

Spring		
Course	Credit	Grade
ENME 472	3	
ENME Tech Elective	3	
ENME Tech Elective	3	
Technical Elective	3	
Humanities (HU)*	3	
Total	15	

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

MECHANICAL ENGINEERING

NAME: _____

UID: _____

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- The cumulative average of these courses must be a 2.0	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 206 - Intro to MATLAB	1	
MATH 241 - Calculus III	4	
MATH 246 - Differential Equations	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

Students must earn a minimum of 120 credits to complete a degree.

Engineering Sciences

Requirements-The cumulative average of these courses must be a 2.0	Credits	Grade
ENES 100 - Intro to Eng Design	3	
ENES 102 - Mechanics I	3	
ENES 220 - Mechanics II	3	
ENES 221 - Dynamics	3	
ENES 232 - Thermodynamics	3	

Major Requirements

Requirements-The cumulative average of these courses must be a 2.0	Credits	Grade
ENME 272 - Intro to CAD	2	
ENME 331 - Fluid Mechanics	3	
ENME 332 - Transfer Processes	3	
ENME 350 - Electronics & Instrumentation I	3	
ENME 351 - Electronics & Instrumentation II	3	
ENME 361 - Vibrations, Controls, & Opt I	3	
ENME 371 - Product Eng & Manufacturing	3	
ENME 382 - Eng Materials & Manufact Process	3	
ENME 392 - Stat Methods for Prod & Proc Dev	3	
ENME 462 - Vibrations, Controls, & Opt II	3	
ENME 472 - Integrated Product P & Design	3	

Technical Requirements

ENME 4XX - Tech Elective**	3	
ENME 4XX - Tech Elective**	3	
ENME 4XX - Tech Elective**	3	
ENME 4XX - Tech Elective**	3	
TECH 4XX - Tech Elective**	3	
TECH 4XX - Tech Elective**	3	
ENGL 393 - Technical Writing	3	

**See Departmental Advisor for a listing of possible technical electives and approval.

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 and 246	15	
PHYS 161, 260, 261, 270 and 271	11	
ENES 100, 102, 220, 221 and 232	15	
ENME 272 or ENME 382	3	

Benchmark 3 requirements

ENGL 393	3	
ENME 331, 350 and 392	9	
Two of: ENME 351, 361, 371, 382	6	