MECHATRONICS

NAME: _____

UID:_____

GENERAL EDUCATION REQUIREMENTS		
Fundamental Studies		
Academic Writing (AW)	ENGL 101	3
Professional Writing (PW)	ENGL 39X	3
Oral Communication (OC)		3
Mathmatics (MA)	MATH140	4
Analytic Reasoning (AR)	MATH140	0
Distributive Studies		
History/Social Sciences (HS*)		3
History/Social Sciences (HS*)		3
Humanities (HU*)		3
Humanities (HU*)		3
Natural Sciences No Lab (NS)	PHYS 161	3
Natural Sciences w/Lab (NL)	PHYS 260/261	4
Scholarship in Practice (SP*) in major	ENES 100	3
Scholarship in Practice (SP*) out major		3
Big Question Courses		
Big Question (SCIS*)		0/3
Big Question (SCIS*)		0/3
Diversity		
Understanding Plural Societies (UP*)		0/3
Understanding Plural Societies (UP*) OR		0/3
Cultural Competency (CC*)		0/3
MAJOR REQUIREMENTS		
Basic Sciences		
CHEM 135 - Chem for Eng OR 131 & 134-F	und & Prin	3/3&1
PHYS 161 - General Physics I (NS)		0
PHYS 260 and PHYS 261 - Gen Physics II &	Lab (NL)	0
PHYS 270 and PHYS 271 - Gen Physics III & Lab		3&1
MATH 140 - Calculus I (MA/AR)		0
MATH 141 - Calculus II		4
ENME/ENAE202 - Computing Engineers		3
MATH 241 - Calculus III		4
MATH 240 or MATH461 - Linear Algebra		3 or 4
MATH 246 - Differential Equations		3
Engineering Sciences		
ENES 100 - Intro to Eng Design (SP)		0
ENES 102 - Mechanics I		3
ENES 220 - Mechanics II		3
ENES 232 - Thermodynamics		3

IVIAJOR SPECIFIC COURSES	I
ENMT 301 - Structural Dynamics	3
ENMT 313 - Real Time Software Systems	3
ENMT 322 - Discrete Signal Analysis	3
ENMT 332 - Classical Control Theory	3
ENMT 361 - Mechatronics & Controls Lab I	3
ENMT 362 - Mechatronics & Controls Lab II	3
ENMT 372 - Robotic Systems	3
ENMT 380 - Intro to Robotics	3
ENMT 450 - Robotics Programming	3
ENMT 471 - Manufacturing & Automation	3
ENMT 473 - Motion Planning Autonomous	3
ENMT 477 - Machine Learning Mechatronics	3
ENMT 483 - Mechatronic Systems I	3
ENMT 484 - Mechatronics Systems II	3
Electives	
Technical Elective	3
Technical Elective	3
Program Elective	3

Requirements for Graduation:
Final 30 credits must be earned at UMD
15 of the final 30 credits must be earned at the 300-400 level
12 of the final 30 credits must be upper level major coursework
A minimum 2.00 cumulative UM GPA and satisfactory completion of all degree requirements are required for graduation
Students matriculating after Fall 2012 must have a 2.0 minimum GPA for all
major requirements, minor requirements, and undergraduate certificate requirements
(Major courses are defined as: departmental courses, basic sciences, engineering
sciences, specified degree tracks, technical requirements/ electives and
Professional Writing (PW)

* Can double/triple count with I-series and/or Diversity.

** See Major-specific websites or advisors for appropriate electives.

Mechatronics Graduation Plan

Name:_____

UID:_____

Year 1*		Fall	
Current Engineering	Course	Credit	Grade
Students:	MATH 140 (AR/MA)	4	
https://eng.umd.edu/servic es/academic-policies Prospective Engineering Students: https://lep.umd.edu/	PHYS 161 (NS)	3	
	CHEM 135	3	
	ENES 100 (SP)	3	
	ENGL 101 (AW)	3	
	Total	16	

	Spring	
Course	Credit	Grade
MATH 141	4	
PHYS 260 & PHYS261 (NL)	4	
ENES 102	3	
GenEd	3	
Total	14	

Year 2*	Fall		
	Course	Credit	Grade
	MATH 241	4	
	PHYS 270	3	
	PHYS 271	1	
	ENES 220	3	
	GenEd	3	
	Total	17	

	Spring	
Course	Credit	Grade
MATH 246	3	
MATH 240	4	
ENES 232	3	
ENAE 202	3	
GenEd	3	
Total	16	

Year 3	Fall		
	Course	Credit	Grade
	ENMT 301	3	
	ENMT 322	3	
	ENMT 361	3	
	ENMT 380	3	
	GenEd (as needed)	3	
	Total	15	

	-	
	Spring	
Course	Course Credit Grad	
ENMT 313	3	
ENMT 332	3	
ENMT 362	3	
ENMT 372	3	
Professional Writing (PW)	3	
Total	15	

Year 4		Fall	
	Course	Credit	Grade
	ENMT 450	3	
	ENMT 471	3	
	ENMT 473	3	
	ENMT 483	3	
	Total	12	

	Spring	
Course	Credit	Grade
ENMT 477	3	
ENMT 484	3	
ENMT 4xx	3	
ENMT 4xx	3	
ENXX 4xx	3	
Total	15	

*Students are expected to satisfy all general education requirements including fundamental studies, distributive studies, big question, and diversity courses, before entry into the Mechatronics major.