NAME:

UID:

MECHATRONICS

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 Cultural Competency (CC*)			0/3
MAJOR REQUIREMENTS			
Basic Sciences			
CHEM 135 - Chem for Eng OR 131 & 134-Fund & 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

MAJOR SPECIFIC COURSES		
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.

Name:_____   **UID:**_____

Year 1*	Fall				Spring		
Current Engineering Students: https://eng.umd.edu/services/academic-policies Prospective Engineering Students: https://lep.umd.edu/	*Course*	*Credit*	*Grade*		*Course*	*Credit*	*Grade*
	MATH 140 (AR/MA)	4			MATH 141	4	
	PHYS 161 (NS)	3			PHYS 260 & PHYS261 (NL)	4	
	CHEM 135	3			ENES 102	3	
	ENES 100 (SP)	3			GenEd	3	
	ENGL 101 (AW)	3					
	Total	**16**			**Total**	**14**	

Year 2*	Fall				Spring		
	Course	*Credit*	*Grade*		*Course*	*Credit*	*Grade*
	MATH 241	4			MATH 246	3	
	PHYS 270	3			MATH 240	4	
	PHYS 271	1			ENES 232	3	
	ENES 220	3			ENAE 202	3	
	GenEd	3			GenEd	3	
	Total	**17**			**Total**	**16**	

Year 3	Fall				Spring		
	Course	*Credit*	*Grade*		*Course*	*Credit*	*Grade*
	ENMT 301	3			ENMT 313	3	
	ENMT 322	3			ENMT 332	3	
	ENMT 361	3			ENMT 362	3	
	ENMT 380	3			ENMT 372	3	
	GenEd (as needed)	3			Professional Writing (PW)	3	
	Total	**15**			**Total**	**15**	

Year 4	Fall				Spring		
	Course	*Credit*	*Grade*		*Course*	*Credit*	*Grade*
	ENMT 450	3			ENMT 477	3	
	ENMT 471	3			ENMT 484	3	
	ENMT 473	3			ENMT 4xx	3	
	ENMT 483	3			ENMT 4xx	3	
					ENXX 4xx	3	
	Total	**12**			**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.