

NAME: \_\_\_\_\_

# MECHATRONICS

UID: \_\_\_\_\_

GENERAL EDUCATION REQUIREMENTS			
<b>Fundamental Studies</b>			
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
<b>Distributive Studies</b>			
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
<b>Big Question Courses</b>			
Big Question (SCIS*)			0/3
Big Question (SCIS*)			0/3
<b>Diversity</b>			
Understanding Plural Societies (UP*)			0/3
Understanding Plural Societies (UP*) OR Cultural Competency (CC*)			0/3
MAJOR REQUIREMENTS			
<b>Basic Sciences</b>			
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
<b>Engineering Sciences</b>			
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
<b>Electives</b>		
Technical Elective		3
Technical Elective		3
Program Elective		3

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

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

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

