

#	Number	Title	Hours			Needed	Prerequisites
			Lect	Lab	Cr		
<b>Mechanical Engineering Courses (21 Hours)</b>							
1	ENGR 2214	Statics	3	0	3	Fall '08	MATH 2254 (co), PHYS 2211K
2	ENGR 3131/32	Strength of Materials / Lab	3	3	4	Fall '09	MATH 2254, ENGR 2214
3	ENGR 3122	Dynamics	3	0	3	Spr '09	ENGR 2214
4	ENGR 3343	Fluid Mechanics	3	0	3	Spr '10	ENGR 2214, MATH 2254
5	ENGR 3345	Fluid Mechanics Lab - Mechatronics	0	3	1	Spr '10	Taken with ENGR 3343
6	ENGR 3125	Machine Dynamics & Vibrations	3	0	3	Fall '10	CSE 1301E, ENGR 3122, MATH 2255, MATH 2306
7	ENGR 4421	Instruments and Controls	3	3	4	Fall '10	MATH 2306, EE 2401
<b>Total:</b>			<b>18</b>	<b>9</b>	<b>21</b>		

<b>Electrical Engineering Courses (20 Hours)</b>							
1	EE 2301	Circuits	3	3	4	Fall '08	MATH 2253, PHYS 2211K
2	EE 2501	Digital Circuits	3	3	4	Fall '09	EE 2301
3	EE 2401	Electronics I	3	3	4	Spr '09	EE 2301, MATH 2254, PHYS 2211K
4	EE 3500	Survey of Electric Machines	3	3	4	Fall '10	EE 2301
5	EE 4610	Introduction to Control Systems	4	3	4	Spr '10	MATH 2306, EE 2301
<b>Total:</b>			<b>16</b>	<b>15</b>	<b>20</b>		

<b>Computer Science Courses (8 Hours)</b>							
1	CSE 1301E	Programming & Problem Solving I	3	2	4	Spr '08	MATH 1113
2	CSE 1302E	Programming & Problem Solving II	3	2	4	Spr '09	CSE 1301E
<b>Total:</b>			<b>6</b>	<b>4</b>	<b>8</b>		

<b>Mechatronics Engineering Courses (16 Hours)</b>							
1	MTRE 1000	Introduction to Mechatronics Engineering	1	0	1	Fall '07	
2	MTRE 3710	Mechatronics Engineering Fundamentals	3	3	4	Spr '10	MATH 2254, ENGR 3122
3	MTRE 4000	Digital Control for Mechatronics	3	0	3	Fall '10	EE 4610
4	MTRE 4200	Robotics Analysis & Synthesis	3	0	3	Spr '11	MTRE 3710, EE 3500, ENGR 3122
5	MTRE 4400	Mechatronics System Design	4	0	4	Spr '11	EE 4610, ECON 2107
6	XXXX	Carry-over from Core Area A	0	0	1		
<b>Total:</b>			<b>14</b>	<b>3</b>	<b>16</b>		

<b>USG Core Area A - Essential Skills Courses (9 Hours)</b>							
1	ENGL 1101	Composition I	3	0	3	Fall '07	None
2	ENGL 1102	Composition II	3	0	3	Spr '08	ENGL 1101 "C" or Better
3	MATH 2253	Calculus I	4	0	4	Fall '07	
4	XXXX	Transfer 1 Hour to Major Curriculum	0	0	-1	Fall '07	
<b>Total:</b>			<b>10</b>	<b>0</b>	<b>9</b>		

<b>USG Core Area B - Institutional Option Courses (4 hrs)</b>							
1	COMM 2400	Public Speaking	2	0	2	Spr '09	
2	STS 2400	Science, Technology, & Society	2	0	2	Fall '09	ENGL 1101
<b>Total:</b>			<b>4</b>	<b>0</b>	<b>4</b>		

<b>USG Core Area C1 - Literature of the World (Any One 3 Hours)</b>							
1	ENGL 211X	World Literature I (2111) or II (2112)	3	0	3	Fall '09	ENGL 1102
2	ENGL 212X	British Literature (2120), I (2121), or II (2122)	3	0	3	Fall '09	ENGL 1102
3	ENGL 213X	American Literature (2130), I (2131), or II (2132)	3	0	3	Fall '09	ENGL 1102
4	ENGL 214X	Western Literature I (2141) or II (2142)	3	0	3	Fall '09	ENGL 1102
5	ENGL 2300	African-American Literature and Culture	3	0	3	Fall '09	ENGL 1102
<b>Total:</b>			<b>3</b>	<b>0</b>	<b>3</b>		

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			Lect	Lab	Cr		
<b>USG Core Area C2 - Art and Culture of the World (Any One 3 Hours)</b>							
1	ARTS 2001	Arts Appreciation	3	0	3	Spr '11	ENGL 1101
2	ARTS 2002	Drama Appreciation	3	0	3	Spr '11	ENGL 1101
3	ARTS 2003	Music Appreciation	3	0	3	Spr '11	ENGL 1101
4	FREN 1002	Elementary French II	3	0	3	Spr '11	
5	GRMN 1002	Elementary German II	3	0	3	Spr '11	
6	SPAN 1002	Elementary Spanish II	3	0	3	Spr '11	
<b>Total:</b>			<b>3</b>	<b>0</b>	<b>3</b>		

<b>USG Core Area D - Science, Mathematics, and Technology (11 Hours)</b>							
1	PHYS 2211K	Principles of Physics I	3	3	4	Spr '08	MATH 2253
2	PHYS 2212K	Principles of Physics II	3	3	4	Fall '08	MATH 2253, PHYS 2211K
3	MATH 2306	Ordinary Differential Equations	3	0	3	Fall '08	MATH 2254
<b>Total:</b>			<b>9</b>	<b>6</b>	<b>11</b>		

<b>USG Core Area E1 - American Context (Any One 3 Hours)</b>							
1	HIST 2111	U.S. History I	3	0	3	Fall '10	
2	HIST 2112	U.S. History II	3	0	3	Fall '10	
3	POLS 1101	American Government	3	0	3	Fall '10	
<b>Total:</b>			<b>3</b>	<b>0</b>	<b>3</b>		

<b>USG Core Area E2 - World History (Any One 3 Hours)</b>							
1	HIST 1111	World Civilization - Pre 1500	3	0	3	Spr '11	
2	HIST 1112	World Civilization - Post 1500	3	0	3	Spr '11	
<b>Total:</b>			<b>3</b>	<b>0</b>	<b>3</b>		

<b>USG Core Area E3 - Behavioral Sciences (3 Hours)</b>							
1	ECON 2107	Engineering Economics	3	0	3	Spr '10	MATH 2553
<b>Total:</b>			<b>3</b>	<b>0</b>	<b>3</b>		

<b>USG Core Area E4 - Cultures &amp; Societies (Any One 3 Hours)</b>							
1	ANTH 1102	Introduction to Anthropology	3	0	3	Spr '11	
2	ES 1100	Ethnic Studies	3	0	3	Spr '11	
3	GEOG 1101	Intro. To Human Geography	3	0	3	Spr '11	
4	POLS 2401	Global Issues	3	0	3	Spr '11	
5	RELG 1200	World Religion	3	0	3	Spr '11	
<b>Total:</b>			<b>3</b>	<b>0</b>	<b>3</b>		

<b>USG Core Area F - Related To Major (18 Hours)</b>							
1	CHEM 1211K	Principles of Chemistry I	3	3	4	Fall '07	MATH 1111 or Higher
2	ENGR 2501	Material Science	3	0	3	Spr '10	MATH 2254, CHEM 1211K
3	MATH 2254	Calculus II	4	0	4	Spr '08	MATH 2253
4	ENGR 2710	Engineering Calculations	4	0	4	Spr '09	MATH 2254
5	EDG 1211	Engineering Graphics I	3	0	3	Fall '07	None
<b>Total:</b>			<b>17</b>	<b>3</b>	<b>18</b>		

<b>Additional Math Course (4 Hours)</b>							
1	MATH 2255	Calculus III	4	0	4	Fall '09	MATH 2254
<b>Total:</b>			<b>4</b>	<b>0</b>	<b>4</b>		

Program Total	116	40	129
BOR Total			128

Note: CSE 1301E/1302E are the preferred sections for Mechatronics Majors. CSE 1301C/1302C and CSE 1301J/1302J are acceptable substitutes.