

### Associate of Pre-Engineering Guidesheet 2015-16

COURSE	COURSE TITLE	CREDIT	OFFERED	PREREQUISITE
<b>GE Courses</b>				
ENGL 1010	Into to Academic Writing	3	F/S/Su	
ENGL 2010	Intermediate Writing	3	F/S/Su	ENGL 1010
LM 1010	Information Literacy	1	F/S/Su	
CSIS 1040 /ENGR 2170	Programming with MatLab	3	S	"C" in MATH 1210
MATH 1210	Calculus	4	F/S/Su	"C" in MATH 1050 & MATH 1060
<b>Math (Choose a minimum of 12 credits)</b>				
MATH 1040	Statistics	4	F/S/Su	Math ACT of 23 or grade of C or better in MATH 1010
MATH 1220	Calculus II	4	F/S	"C" in MATH 1210 or H.S. AP Calculus
MATH 2210	Calculus III	4	F/S	C in MATH 1220
MATH 2250	Linear Algebra & Differential Equations	4	F	MATH 1210 & MATH 1220
MATH 2270	Linear Algebra	3	F	MATH 1220
MATH 2280	Differential Equations	3	S	MATH 1220 & MATH 2270
MATH 3600	Numerical Analysis	3	S-even	MATH 2270 and working knowledge of computer language
<b>Engineering Courses (choose 20 credits)</b>				
ENGR 1010	Engineering in the 21st Century	3	F/S	
ENGR 1030	Computer Assisted Design - SolidWorks	3	F/S	
ENGR 2010	Statics	3	F	ENGR 1010, MATH 1210, PHYS 2210/2215
ENGR 2030	Dynamics	3	S	ENGR 2010
ENGR 2140	Strength of Materials	3	S	ENGR 2010, Co-req ENGR 2145
ENGR 2145	Strength of Materials Lab	1	S	Co-req ENGR 2140
CCET 2240	Plane Surveying & GPS	2	F	MATH 1060
CCET 2245	Plane Surveying & GPS Lab	1	F	Co-req ENGR 2240
ENGR 2250	Electric Circuits	3	S	MATH 2280, PHYS 2220/25, Co-req ENGR 2275
ENGR 2255	Electric Circuits Lab	1	S	ENGR 2010, Co-req ENGR 2270
ENGR 3000	Thermodynamics	3	F	PHYS 2220, MATH 2210
ENGR 3010	Material Science	3	F	CHEM 1210, ENGR 2140, co-req ENGR 3015
ENGR 3015	Material Science Lab	1	F	Co-req ENGR 3010
ENGR 3050	Fluid Mechanics	3	S	ENGR 3000, Co-req 3055
ENGR 3055	Fluid Mechanics Lab	1	S	Co-req ENGR 3050
<b>Additional Science Electives (choose 15 credits)</b>				
BIOL 1610	General Biology I	3	F/S/Su	Co-req BIOL 1615
BIOL 1615	General Biology I Lab	1	F/S/Su	Co-req BIOL 1610
BIOL 1620	General Biology II	3	F/S/Su	BIOL 1610/1615
BIOL 1625	General Biology II Lab	1	F/S/Su	
CHEM 1210	Principles of Chemistry I	4	F/Su	Two yrs of HS algebra or MATH 1050
CHEM 1215	Principles of Chemistry I Lab	1	F/Su	Co-req CHEM 1210
CHEM 1220	Principles of Chemistry II	4	S/Su	Minimum of "C" or better in CHEM 1210
CHEM 1225	Principles of Chemistry II Lab	1	S/Su	Co-req CHEM 1220
CHEM 2310	Organic Chemistry	4	F/Su	Minimum of "C" or better in CHEM 1220
CHEM 2315	Organic Chemistry I Lab	1	F/Su	
CHEM 2320	Organic Chemistry II	4	S/Su	Minimum of "C" or better in CHEM 2310
CHEM 2325	Organic Chemistry II Lab	1	S/Su	Co-req CHEM 2320
GEO 1110	Physical Geology	3	F	Co-req GEO 1115
GEO 1115	Physical Geology Lab	1	F	Co-req GEO 1110
PHYS 2210	Physics for Scientists & Engineers	4	F/S	MATH 1210, Co-req PHYS 2215
PHYS 2215	Physics for Scientists & Engineers Lab	1	F/S	Co-req PHYS 2210
PHYS 2220	Physics for Scientist & Engineers II	4	F/S	PHYS 2210/15 & MATH 1220
PHYS 2225	Physics for Scientist & Engineers II Lab	1	F/S	Co req PHYS 2220
<b>Additional Credits (Choose a minimum of 7 credits) from Math, Science or Engineering Electives</b>				