

Academic Plan of Study (APS) for BS in Systems Engineering

120 hours required to complete degree

Legend: RED for Pre-Requisites that require a C or better unless otherwise specified
BLUE for courses that can be taken as either a Pre or Corequisites

Year 1							
Fall Semester				Spring Semester			
Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours	Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours
ENGR 1300	Exploring Engineering & Technology with Success		2	ENGR 1302	Logic and Computational Problem Solving		3
ENGR 1301	Foundations of Math and Science for Engineering		3	ENGR 1303	Engineering Visualization and Graphical Communication		3
MATH 1241	Calculus I	MATH 1103 or math placement	3	MATH 1242	Calculus II	MATH 1241	3
XXXX 15xx	Themes Course		3	PHYS 2101	Physics I	MATH 1241	3
XXXX 15xx	Themes Course		3	PHYS 2101L	Physics I Lab	PHYS 2101	1
				WRDS 1103	Writing		3
Credit Hour Total			14	Credit Hour Total			16
Year 2							
Fall Semester				Spring Semester			
Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours	Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours
SEGR 2105	Comp. Meth. for Sys. Engr.	ENGR 1300, ENGR 1302, and MATH 1242	3	SEGR 2110	Systems Engr. Concepts	SEGR 2105	3
SEGR 2106	Engr. Economic Analysis	Must have at least Sophomore standing	3	STAT 3128	Prob. & Stat. for Engr.	MATH 2241 with a D or above	3
MATH 2241	Calculus III	MATH 1242	3	CTCM 2530	Critical Thinking and Comm.	WRDS 1103 and at least Sophomore Standing	3
MATH 2164	Matrices & Linear Algebra	MATH 1241	3		Technical Elective 1	Check Catalog for Prerequisites	3
PHYS 2102	Physics II	PHYS 2101; MATH 1242	3		Physical Science Elective	Check Catalog for Prerequisites	3
PHYS 2102L	Physics II Lab	PHYS 2101L; PHYS 2102	1				
Credit Hour Total			16	Credit Hour Total			15
Year 3							
Fall Semester				Spring Semester			
Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours	Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours
XXXX 1575	American Democracy		3	SEGR 3102	System Simulation, Modeling, and Analysis	STAT 3128	3
SEGR 3105	Computational Methods for Systems Engineering II	SEGR 2105	3	SEGR 3111	Project Management	STAT 3128 or STAT 1220 with a D or above; fulfilled Gen Ed Oral Comm and Writing requirements	3
SEGR 3107	Decision and Risk Analysis	STAT 3128 with a C or above; SEGR 2106 with a D or above	3	MATH 2171	Differential Equations	MATH 1242	3
SEGR 3201	Operations Research I - Deterministic Models	MATH 1242 and 2164	3	SEGR 3202	Operations Research II - Stochastic Models	MATH 2164 and STAT 3128	3
Conc/ATE 1	Concentration Course 1	Check Catalog for Prerequisites	3	SEGR 3110	System Design and Deployment	SEGR 3105 and PHYS 2102 with a D or above	3
Credit Hour Total			15	Credit Hour Total			15
Year 4							
Fall Semester				Spring Semester			
Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours	Course ID	Course Name	Pre/Co-Requisites and Additional Restrictions	Credit Hours
SEGR 3290	Sys. Design Project I	Senior Standing in SE, SEGR 2110, 3110, & (1302 or 3107)	2	SEGR 3291	Design Project II	Department Approval and SEGR 3290	2
ENGR 3295	Prof. Development	Junior or Senior Standing	1	SEGR 4170	Total Quality Systems	STAT 3128	3
SEGR 4114	Production Control Systems	(STAT 1220, 1221, 1222, or 3128 with a C or above) and SEGR 3201 with a D or above, SEGR 3202	3	XXXX 15xx	Themes Course		3
SEGR 4141	Engr. Experimental Design	STAT 3128	3		Concentration Course 3	Check Catalog for Prerequisites	3
	Concentration Course 2	Check Catalog for Prerequisites	3		Concentration Course 4	Check Catalog for Prerequisites	3
	Technical Elective 2	Check Catalog for Prerequisites	3				
Credit Hour Total			15	Credit Hour Total			14
Total Credit Hours							120