

Systems Engineering Curriculum

Freshman Year					
ENGR 1201 Intro to Engineering I	MATH 1241	2	ENGR 1202 Intro to Engineering II	ENGR 1201, MATH 1241	2
Physical Science Elective		3	PHYS 2101 Physics I	MATH 1241	3
MATH 1241 Calculus I	Appropriate eligibility level of math placement, MATH 1103	3	PHYS 2101L Physics I Lab	PHYS 2101	1
UWRT 1103/1104 Writing & Inquiry in Academic Contexts I & II	Appropriate Score on ACT or SAT Critical Reading and high school performance.	3/4	MATH 1242 Calculus II	MATH 1241	3
Liberal Studies Elective*		3	ECON 1101 Economics for Non-Majors (ECON 2101)		3
		14			12
Sophomore Year					
PHYS 2102 Physics II	PHYS 2101, MATH 1242	3	SEGR 2101 Systems Engineering Concepts	ENGR 1202	3
PHYS 2102L Physics II Lab	PHYS 2101L (or PHYS 1101L), PHYS 2102	1	STAT 3128 Probability & Statistics for Engineers	MATH 2241	3
SEGR 2105 Computational Methods for Systems Engr. I	ENGR 1202, MATH 1241, MATH 1242	3	CHEM 1251 Chemistry I	MATH 1100 (or equivalent test score)	3
SEGR 2106 Engineering Economic Analysis	Sophomore Standing	3	CHEM 1251L Chemistry I Lab	CHEM 1251	1
MATH 2241 Calculus III	MATH 1242	3	LBST 2301 Critical Thinking & Communication		3
MATH 2164 Matrices & Linear Algebra	MATH 1241	3	Technical Elective Course*		3
		16			16
Junior Year					
SEGR 3105 Computational Methods for Systems Engr. II	SEGR 2105	3	SEGR 3101 System Design and Deployment	SEGR 2101	3
SEGR 3107 Decision and Risk Analysis	STAT 3128	3	SEGR 3102 Sys. Simulation, Modeling & Analysis	STAT 3128	3
OPRS 3111 Operations Res.-Deterministic	MATH 1242, MATH 2164	3	SEGR 3111 Project Management	STAT 3128	3
Concentration Course*		3	MATH 2171 Differential Equations	MATH 1242	3
Liberal Studies Elective*		3	OPRS 3113 Operations Research.- Probabilistic	MATH 1242, MATH 2164, MATH 3122, STAT 2122, or STAT 3122	3
			Concentration Course*		3
		15			18
Senior Year					
SEGR 3290 Systems Design Project I (W)(O)	Senior Standing	1	SEGR 3291 Systems Design Project II (W)(O)	SEGR 3290	3
ENGR 3295 Professional Development	JR or SR standing per dept. requirement	1	SEGR 3670 Total Quality Systems	STAT 3128	3
SEGR 3114 Production Planning and Inventory Control	STAT 3128	3	Liberal Studies Elective*		3
SEGR 4141 Engr. Experimental Design	STAT 3128	3	Technical Elective*		3
Technical Elective*		3	Concentration Course*		3
Concentration Course*		3			
		14			15

Total Hours 119 / 120

***Notes:**

1. (W) indicates courses with emphasis on writing and (O) indicates courses with emphasis on oral communication
2. ENGR 3295 Professional Development can be taken in fall or spring during the senior year
3. See the list of available Liberal Studies Electives from the UNC Charlotte Undergraduate Catalog
Must take of the following courses: LBST 110X, LBST 2101, LBST 2102, and LBST 221X
4. See the list of Concentration courses available from the program
5. See the list of Technical Electives available from the program