

SYSTEMS ENGINEERING & OPERATIONS RESEARCH

Systems Engineering BS Program Sample Schedule (For students in the Honors program)

<u>1st Year – 1st Semester (Fall)</u>		<u>1st Year – 2nd Semester (Spring)</u>	
HNRS 110 – Research Methods	4	HNRS 122 – Reading the Arts	3
ECON 103 or 103H – Contemporary Microeconomic Principles	3	MATH 114 – Analytic Geometry & Calculus II or MATH 116 – Analytic Geometry and Calc II	4
CS 112 – Intro to Computer Programming	4	PHYS 160 or 160H – University Physics I	3
ENGR 107 – Engineering Fundamentals	2	PHYS 161 – University Physics I Lab	1
MATH 113 – Analytic Geometry & Calculus I	4	SYST 101 – Understanding Systems Engineering	3
		CS 211 or 211H – Object-Oriented Programming	3
	17		17
<u>2nd Year – 1st Semester (Fall)</u>		<u>2nd Year – 2nd Semester (Spring)</u>	
HNRS 240 – Reading the Past	3	MATH 203 – Linear Algebra	3
MATH 213 – Analytic Geometry & Calculus III or MATH 215 – Honors Calculus III	3	CHEM 211-3 or CHEM 251 or BIOL 213 or PHYS 262 & PHYS 263	4
PHYS 260 – University Physics II	3	MATH 214 – Elementary Differential Equations	3
PHYS 261 – University Physics II Lab	1	SYST 220 – Dynamic Systems I	3
SYST 210 – Systems Design	3	SYST 221 – Systems Modeling Lab	1
Department-approved elective	3		
	16		14
<u>3rd Year – 1st Semester (Fall)</u>		<u>3rd Year – 2nd Semester (Spring)</u>	
HNRS 131 – Contemporary Society in Multiple Perspective or (HNRS 230 in the spring)	3	SYST 335/OR 335 – Discrete Systems Modeling and Simulation	3
OR 441 – Deterministic Operations Research	3	SYST 330 – Systems Methods	3
STAT 344 – Probability and Statistics for Engineers and Scientists I	3	SYST 371 – Systems Engineering Management	3
SYST 320 – Dynamic Systems II	3	STAT 354 – Probability and Statistics for Engineers and Scientists II	3
Technical Elective	3	SYST 395 – Applied Systems Engineering	3
	15		15
<u>4th Year – 1st Semester (Fall)</u>		<u>4th Year – 2nd Semester (Spring)</u>	
SYST 470 – Human Factors Engineering	3	HNRS 353 – Technology in the Contemporary US	3
SYST 489 - Senior Seminar	3	OR 442 – Stochastic Operations Research	3
SYST 490 – Senior Design Project I	3	SYST 495 – Senior Design Project II	3
SYST 473 – Decision and Risk Analysis	3	Dept. approved elective	3
Technical Elective	3	Technical Elective	3
	15		15

The systems engineering program requires nine semester hours of technical electives. Students must select one of the following specialization areas: Aviation Systems, Bioengineering, Control Systems, Computer Network Systems, Data Analytics, Engineering Systems, Financial Engineering, Mechanical Engineering, Operations Research or Software-Intensive Systems. **All specializations and the corresponding plan of study must be approved by the student’s advisor.**

Technical electives are normally composed of 300- and 400- level courses. Two hundred (200)- level courses are only included for special reasons (e.g., if they are prerequisites for other 300- and 400- level technical electives or if they are needed for the FE/EIT exam).

CONTACT INFORMATION

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