



KENNESAW STATE
UNIVERSITY

Double Owl Pathway of Study
EFFECT TERM: Fall 2023

Undergraduate Program Name: Industrial and Systems Engineering, BS (ISYE) –
Systems Engineering Concentration
Graduate Program Name: Data Science and Analytics, MS (DSA)

Course Pairs:

Double Owl Scholars will NOT take the following BS ISYE courses:	In their place, Double Owl Scholars will take the following MS DSA courses:
ISYE 3600 Probability and Statistics II	STAT 7100 Statistical Methods
ISYE Technical Elective	Any MS DSA course (STAT 7020 recommended)
ISYE Technical Elective	Any MS DSA course (STAT 7220 recommended)

Year 1 - Fall	Credits	Year 1 - Spring	Credits
*Area A1: ENGL 1101 - English Composition I	3	*Area A1: ENGL 1102 - English Composition II	3
Core B2: Cultural Perspectives	3	*Area B1: ECON 1000 - Economic Issues	2
ENGR 1000 - Intro to Engineering	1	ISYE 1001L - Intro to Industrial and Systems Engineering	1
MATH 1190 - Calculus I	4	*Area E1: POLS 1101 - American Government	3
CHEM 1211 - Principles of Chemistry I	3	*Area D1: MATH 2202 - Calculus II	4
CHEM 1211 - Principles of Chemistry I Lab	1	*Area D2: PHYS 2211 - Principles of Physics I	3
		*Area D2: PHYS 2211L - Principles of Physics I Lab	1
TOTAL SEMESTER CREDITS	15	TOTAL SEMESTER CREDITS	17
Year 2 - Fall	Credits	Year 2 - Spring	Credits
TCOM 2010 - Technical Writing	3	*Area E4: Social Sciences	3
†ISYE 2600 - Probability and Statistics I	3	*Area E3: World History	3
ENGR 1100 - Survey of Engineering Applications from Mathematics	4	†MATH 3260 - Linear Algebra I	3
CSE 1321 - Programming and Problem Solving	3	ENGR 2214 - Statics	3
CSE 1321 - Programming and Problem Solving Lab	1	Area F: PHYS 2212 & 2212L or CHEM 1212 & 1212L or BIOL 1107 & 1107L	4
*Area E2: U.S. History	3		
TOTAL SEMESTER CREDITS	17	TOTAL SEMESTER CREDITS	16
Year 3 - Fall	Credits	Year 3 - Spring	Credits
EDG 2110 - Survey of Engineering Graphics	2	ISYE Technical Elective	3
ISYE 3100 - Systems Reliability & Maintainability	3	ISYE 3300 - System Dynamics & System Thinking	3

ENGR 3250 - Project Management for Engineers	3	†ISYE 3400 - Eng. Optimization: Deterministic Decision Models	3
ISYE 3150 - Design and Improvement of Quality Processes	3	ENGR 3122 - Dynamics or ENGR 3410 - Thermodynamics	3
ENGR 3325 - Engineering Economic Analysis	3	*Area C1: Literature of the World	3
Core C2: Arts & Culture	3		
TOTAL SEMESTER CREDITS	17	TOTAL SEMESTER CREDITS	15
Year 4 - Fall	Credits	Year 4 - Spring	Credits
STAT 7100 -Statistical Methods	3	EE 2305 - Electronic Circuits & Machines	4
ISYE 4500 - Systems Modeling and Simulation	3	ISYE 3200 - Human Machine Systems	3
†ISYE 4901 - Senior Design I	1	ISYE 4902 - Senior Design Project	3
STAT 7020 – Statistical Computing and Simulation(Recommended)	3	ISYE Technical Elective	3
ISYE 4200 - Engineering Optimization: Stochastic Decision Models	3	STAT 7220 -Applied Experimental Design (Recommended)	3
ENGR 4402 - Engineering Ethics	1		
TOTAL SEMESTER CREDITS	14	TOTAL SEMESTER CREDITS	16
Year 5 - Fall	Credits	Year 5 - Spring	Credits
STAT 7010: Mathematical Statistics I	3	STAT 7210: Applied Regression Analysis	3
MS DSA Elective or project	3	MS DSA Elective or project	3
MS DSA Elective or project	3	MS DSA Elective or project	3
MS DSA Elective or project	3	MS DSA Elective or project	3
MS DSA Elective or project	3		
TOTAL SEMESTER CREDITS	15	TOTAL SEMESTER CREDITS	12

PATHWAY TOTAL: $127 + 36 - 9 = 154$