KENNESAW STATE UNIVERSITY

Double Owl Pathway of Study
EFFECT TERM: Fall 2023

Undergraduate Program Name: Industrial and Systems Engineering, BS (ISYE) – SYE concentration

Graduate Program Name: Intelligent Robotics Systems, MS (IRS)

Pathway Description: There is synergism between Robotics and Industrial and Systems Engineering, especially in the areas of manufacturing and optimization. This pathway will allow BS ISYE students to focus on a career in Intelligent Robotics Systems

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 Technical Electives (up to 9 hours)	Student may choose from: MTRE 6720, MTRE 6740, MTRE 6750

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 Reliabiility & 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**
MTRE 6740	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
Technical elective	3	**MTRE 6720**	3
ISYE 4200 - Engineering Optimization: Stochastic Decision Models	3	**MTRE 6750**	3
ENGR 4402 - Engineering Ethics	1		
TOTAL SEMESTER CREDITS	**14**	**TOTAL SEMESTER CREDITS**	**16**
Year 5 – SUMMER	**Credits**		**Credits**
MRTE 6200	3		
MTRE 6710	3		
TOTAL SEMESTER CREDITS	**6**		
Year 5 - Fall	**Credits**	**Year 5 - Spring**	**Credits**
MTRE 6100	3	**MTRE 6400**	3
CS 7267	3	**CS 7367**	3
MTRE 6300	3		
TOTAL SEMESTER CREDITS	**9**	**TOTAL SEMESTER CREDITS**	**6**

PATHWAY TOTAL: 127 + 30 – 9 = 148