



**KENNESAW STATE UNIVERSITY**

**Double Owl Pathway of Study**

**Undergraduate Program Name:** Bachelor of Science in Industrial and Systems Engineering

**Graduate Program Name:** Master of Science in Engineering Management

**Course Pairs:**

Double Owl Scholars will NOT take the following Industrial Engineering courses:	In their place, Double Owl Scholars will take the following MS in Engineering Management courses:
ENGR 3250	SYE 6010
ISYE Technical Elective	Any EM Elective
ISYE Technical Elective	Any EM Elective

**INDUSTRIAL ENGINEERING CONCENTRATION**

Year 1 - Fall (credits)	Credits	Year 1 - Spring (credits)	Credits
ENGL 1101: English Composition I [A1]	3	ENGL 1102: English Composition II [A1]	3
MATH 1190: Calculus I [A2]	4	MATH 2202: Calculus II [D1]	4
CHEM 1211 + Lab: Principles of Chemistry [D2]	4	AADS 1102, AMST 1102, ASIA 1102, COM 1100, FL 1002, GWST 1102, LALS 1102, LDRS 2300, PAX 1102, PHIL 2200, POLS 241, or RELS 1102 [B2]	3
ISYE 1000: Introduction to ISYE [F]	3	PHYS 2211 + Lab: Principles of Physics I [D2]	4
Total	14	Total	14
Year 2 - Fall (credits)	Credits	Year 2 - Spring (credits)	Credits
ENGR 1100: Survey of Engineering Applications from Maths	4	ECON 1000: Contemporary Economic Issues [B1]	2
PHYS 2212 + lab or CHEM 1212 +lab or BIOL 1107 +lab [F]	4	MATH 3260: Linear Algebra I	3
CSE 1321 + Lab: Programming & Problem Solving I [F]	4	HIST 2111 or HIST 2112 [E2]	3
ISYE 2600: Applications of Probability	3	ENGR 2214: Engineering Mechanics - Statics	3
TCOM 2010: Technical Writing	3	EDG 1210 Survey of Engineering Graphics	2
		ISYE 3150: Design & Improvement of Quality Processes Δ	3
Total	18	Total	16
Year 3 - Fall (credits)	Credits	Year 3 - Spring (credits)	Credits
POLS 1101: American Politics [E1]	3	ACCT 2100: Introduction to Financial Accounting	3
PHIL 2010, ENGL 2110, ENGL 2111, ENGL 2112, ENGL 2120, ENGL 2121, ENGL 2122, ENGL 2130, ENGL 2131, ENGL 2132, or ENGL 2300 [C1]	3	CRJU 1101, GEOG 1101, PSYC 1101, SOCI 1101, STS 1101*, ANTH 1102, or ECON 2106 [E4]	3
ISYE Technical Elective (1 of 3) Δ	4	ISYE 3125: Statistical Quality Control Δ	3
ISYE 3450: Work Measurement Study Δ	3	ISYE 3350: Logistics & Supply Chain Systems Δ	3
ISYE 3600: Statistics with Applications Δ	3	ISYE 3400: Deterministic Operations Research	3
		ISYE 4425: Facilities Planning & Material Handling Δ	3
Total	16	Total	18
<b>Apply to Double Owl Pathway</b>			
Year 4 - Fall (credits)	Credits	Year 4 - Spring (credits)	Credits
ISYE 4200: Engineering Optimization- Stochastic Decision Models Δ	3	ART 1107, DANC 1107, MUSI 1107, TPS 1107 [C2]	3
ISYE 4250: Manufacturing & Service Systems Δ	3	ENGR 4402: Engineering Ethics Δ	1
ISYE 4500: Systems Modeling & Simulation Δ	3	ISYE 4900: Senior Design Project Δ	3
Any EM elective	3	SYE 6010 Project Management Processes	3

<b>Any EM elective</b>	3	ENGR 3325: Engineering Economic Analysis Δ	3
		HIST 1100, HIST 1111, or HIST 1112 [E3]	3
<b>Total</b>	15	<b>Total</b>	17
SYE 6025 will substitute for FIN 7020			
<b>Apply to MSEM Program</b>			
<b>Year 5 - Fall (9 or 12 credits)</b>	<b>Credits</b>	<b>Year 5 - Spring (9 or 12 credits)</b>	<b>Credits</b>
EM 6510 Data Analytics for Engineering Managers (F1)	3	MGT 7050 Managing and Leading Work Behavior (S1)	3
EM 6650 Quality Systems Management (F1)	3	FIN 7020 Business Finance	3
SYE 6005 Intro to Systems Engineering (F2)	3	Graduate Elective	3
Optional Fall Graduate Elective -->	3	-->Or Optional Spring Graduate Elective	3
<b>Total</b>	9 or 12	<b>Total</b>	9 or 12

Double Pathway

Total: (127 + 21) = 148

### SYSTEMS ENGINEERING CONCENTRATION

Year 1 - Fall (credits)	Credits	Year 1 - Spring (credits)	Credits
ENGL 1101: English Composition I [A1]	3	ENGL 1102: English Composition II [A1]	3
MATH 1190: Calculus I [A2]	4	MATH 2202: Calculus II [D1]	4
CHEM 1211 + Lab: Principles of Chemistry [D2]	4	AADS 1102, AMST 1102, ASIA 1102, COM 1100, FL 1002, GWST 1102, LALS 1102, LDRS 2300, PAX 1102, PHIL 2200, POLS 241, or RELS 1102 [B2]	3
ISYE 1000: Introduction to ISYE [F]	3	PHYS 2211 + Lab: Principles of Physics I [D2]	4
<b>Total</b>	14	<b>Total</b>	14
Year 2 - Fall (credits)	Credits	Year 2 - Spring (credits)	Credits
ENGR 1100: Survey of Engineering Applications from Maths	4	ECON 1000: Contemporary Economic Issues [B1]	2
PHYS 2212 + lab or CHEM 1212 +lab or BIOL 1107 +lab [F]	4	MATH 3260: Linear Algebra I	3
CSE 1321 + Lab: Programming & Problem Solving I [F]	4	HIST 2111 or HIST 2112 [E2]	3
ISYE 2600: Applications of Probability	3	ENGR 2214: Engineering Mechanics - Statics	3
TCOM 2010: Technical Writing	3	EDG 1210 Survey of Engineering Graphics	2
		ISYE 3150: Design & Improvement of Quality Processes Δ	3
<b>Total</b>	18	<b>Total</b>	16
Year 3 - Fall (credits)	Credits	Year 3 - Spring (credits)	Credits
POLS 1101: American Politics [E1]	3	ISYE Technical Elective (2 of 4) Δ	3
PHIL 2010, ENGL 2110, ENGL 2111, ENGL 2112, ENGL 2120, ENGL 2121, ENGL 2122, ENGL 2130, ENGL 2131, ENGL 2132, or ENGL 2300 [C1]	3	CRJU 1101, GEOG 1101, PSYC 1101, SOCI 1101, STS 1101*, ANTH 1102, or ECON 2106 [E4]	3
ISYE 3100 System Reliability and Maintainability Δ	3	ENGR 3122 Engineering Mechanics: Dynamics OR ME 3410 Thermodynamics Δ	3
ISYE 3600: Statistics with Applications Δ	3	ISYE 3200 Human Machine Systems Δ	
ISYE Technical Elective (1 of 4) Δ	3	ISYE 3400: Deterministic Operations Research Δ	3
			3
<b>Total</b>	15	<b>Total</b>	15
<b>Apply to Double Owl Pathway</b>			
Year 4 - Fall (credits)	Credits	Year 4 - Spring (credits)	Credits
HIST 1100, HIST 1111, or HIST 1112 [E3]	3	ART 1107, DANC 1107, MUSI 1107, TPS 1107 [C2]	3
EE 2310 Circuit Analysis I	4	ENGR 4402: Engineering Ethics Δ	1
ISYE 4500: Systems Modeling & Simulation Δ	3	ISYE 4900: Senior Design Project Δ	3

Last Updated: March 23, 2021

ISYE 3300 Systems Dynamics and Sys Thinking Δ	3	ISYE 4200: Engineering Optimization- Stochastic Decision Models Δ	3
<b>Any Graduate EM Elective</b>	3	<b>SYE 6010 Project Management Processes</b>	3
<b>Any Graduate EM Elective</b>	3	ENGR 3325 Engineering Economic Analysis	3
<b>Total</b>	16	<b>Total</b>	16
<b>Apply to MSEM Program</b>			

Year 5 - Fall (9 or 12 credits)	Credits	Year 5 - Spring (9 or 12 credits)	Credits
EM 6510 Data Analytics for Engineering Managers	3	MGT 7050 Managing and Leading Work Behavior	3
EM 6650 Quality Systems Management	3	FIN 7020 Business Finance	3
SYE 6005 Intro to Systems Engineering	3	Graduate Elective	3
Optional Fall Graduate Elective-->	3	--> or optional spring Graduate Elective	3
<b>Total</b>	9 or 12	<b>Total</b>	9 or 12

Double Pathway

Total: (127 + 21) = 148

<b>Δ Requires Engineering Standing General Education Course</b>	<b>† Milestone</b>	<b>*Recommended</b>
<p>This academic map is a suggested four-year schedule of courses based on degree requirements in the undergraduate catalog. This sample schedule serves as a general guideline to help build a full schedule each term. Missing milestones could delay your program. Also see the current undergraduate catalog for a complete list of requirements, electives, and pre-requisites. This map is not a substitute for academic advisement. Note: Requirements are continually under revision, and there is no guarantee they will not be changed or revoked; contact the department and/or program area for current information.</p>		