Double Owl Pathway of Study

Undergraduate Program Name: Bachelor of Science Industrial and Sytstems Engineering
Graduate Program Name: Master of Science in Systems Engineering

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 Systems Engineering courses:
ENGR 3250	SYE 6010
ENGR 3325	SYE 6025
ISYE Technical Elective	Any SYE 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: Prinicples of Physics I [D2]	4
Total	14	Total	14
Year 2 - Fall (credits)	Credits	Year 2 - Spring (credits)	Credits
ENGR 1100: Survey of Engineerng 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	3	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	15	Total	18
Year 4 - Fall (credits)	Credits	Year 4 - Spring (credits)	Credits
SYE 6010 project management processes	3	ART 1107, DANC 1107, MUSI 1107, TPS 1107 [C2]	3
ISYE 4200: Engineering Optimization- Stochastic Decision Models Δ	3	ENGR 4402: Engineering Ethics Δ	1
ISYE 4250: Manufacturing & Service Systems Δ	3	ISYE 4900: Senior Design Project Δ	3
ISYE 4500: Systems Modeling & Simulation Δ	3	Any SYE elective	3
, ISYE Technical Elective (2 of 3) Δ	4	SYE 6025 Economic Decsion Analysis	3
		HIST 1100, HIST 1111, or HIST 1112 [E3]	3

	Total	16		Total	16

Year 5 - Fall (9 or 12 credits)	Credits	Year 5 - Spring (9 or 12 credits)	Credits
QA 6610 Statistics for Quality Assurance	3	SYE 6031 Advanced System Dynamic Modeling or SYE 6020 System Architecture	3
Graduate Elective	3	SYE 6055 Systems Engineering Project	3
Graduate Elective	3	Graduate Elective	3
Optional fall graduate elective	3	Or optional spring graduate elective	3
Total	9 or12	Total	9 or 12

Double Program 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: Prinicples of Physics I [D2]	4
Total	14	Total	14
Year 2 - Fall (credits)	Credits	Year 2 - Spring (credits)	Credits
ENGR 1100: Survey of Engineerng 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 Engineeirng 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	ISYE Technical Eletive (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 Syste 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	3
ISYE Technical Elective (1 of 4) Δ	3	ISYE 3400: Deterministic Operations Research Δ	3
			3
Total	15	Total	15
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
ISYE 3300 Systems Dynamics and Sys Thinking Δ	3	ISYE 4200: Engineering Optimization- Stochastic Decision Models Δ	3
SYE 6010 Project Management Processes	3	**Any SYE Elective**	3
		SYE 6025 Economic Decision Analysis	3
Total	16	Total	16

Year 5 - Fall (9 or 12 credits)	Credits	Year 5 - Spring (9 or 12 credits)	Credits

Last Updated: March 9, 2021

QA 6610 Statistics for Quality Assurance	3	SYE 6031 Advanced System Dynamic Modeling or SYE 6020 System Architecture	3
Graduate Elective	3	SYE 6055 Systems Engineering Proect	3
Graduate Elective	3	Graduate Elective	3
Optional fall graduate elective	3	Or optional spring graduate elective	3
Total	9 or12	Total	9 or 12

Double Program Total: (127 + 21) = 148

Δ Requires Engineering Standing General Education Course	† Milestone	*Recommended
This academic map is a suggested schedule of courses based on degree requirements in the undergraduate and graduate catalogs. 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.		

NOTES: