Study Plan for BSISE

First Year, Fall Semester

ISE 105	Introduction to Industrial and Systems Engineering (Fall only)	2
ENGR 102	Engineering Freshman Academy (Fall only)	2
MATH 125	Calculus I	4
WRIT 150	Writing and Critical Reasoning	4
General education	Category A,B,C,G, or H	4
		16

First Year, Spring Semester

ISE 150	Solving Engineering Problems using Python	4
MATH 126	Calculus II	4
PHYS 151L	Fundamentals of Physics I: Mechanics and Thermodynamics	4
General education	Category A,B,C,G, or H	4
		16

Second Year. Fall Semester

ISE 220	Foundations of Probability Modeling	4
MATH 225	Linear Algebra and Linear Differential Equations	4
MASC 110L	Materials Science, or	
CHEM 105aL	General Chemistry	4
General education	Category A,B,C,G, or H	4
		16

Second Year, Spring Semester

ISE 225	Foundations of Data Analysis	4
ISE 330	Optimization	4
General education	Category A,B,C,G, or H	4
Free Elective		4
		16

Third Year, Fall Semester

ISE 315	Engineering Project Management	4
ISE 370L	Human Factors in Work and Systems Design	4
ISE 382	Database Systems: Storage and Retrieval using SQL	4
MATH 226	Calculus III	4
		16

Third Year, Spring Semester

ISE 435	Discrete Systems Simulation	4
ISE 495ax	Senior Design Project	2
PHYS 152L	Fundamentals of Physics II: Electricity and Magnetism	4
General education	Category A,B,C,G, or H	4
Free Elective		4
		18

Fourth Year, Fall Semester

ISE 350	Principles and Practices of Systems Engineering	4
ISE 495bx	Senior Design Project	2
WRIT 340	Advanced Writing	4
ISE Approved Elective		4
		14

Fourth Year, Spring Semester

ISE 410	Planning and Scheduling for Production and Supply Chains	4
ISE 440	Socio-Technical Systems and Work Organizations	4
ISE Approved Elective		4
Biology Elective		4
		16

Total units required for the program: **128**