

B.S. in Systems Engineering

Enterprise Systems Engineering AOC - Plan of Study

Year One

Term 1		Credits
COM 122	English Composition	3
CS 223	Scientific Programming in C	3
EGR 101	Introduction to Engineering	2
	Lower-level Humanities or Social Sciences Elective	3
MA 241	Calculus and Analytical Geometry I	4
UNIV 101	College Success	1
Credits Subtotal		16.0

Term 2

COM 219	Speech	3
	HU 14X Humanities Elective	3
MA 242	Calculus and Analytical Geometry II	4
PS 150	Physics for Engineers I	3
PSY 101	Introduction to Psychology	3
Credits Subtotal		16.0

Year Two

Term 1		Credits
CEC 220	Digital Circuit Design	3
CEC 222	Digital Circuit Design Laboratory	1
COM 221	Technical Report Writing	3
ES 201	Statics	3
MA 412	Probability and Statistics	3
PS 160	Physics for Engineers II	3
Credits Subtotal		16.0

Term 2

CEC 320	Microprocessor Systems	3
CEC 322	Microprocessor Systems Laboratory	1
ES 204	Dynamics	3
MA 345	Differential Equations and Matrix Methods	4
PS 226L	Physics I Laboratory	1
	Technical Elective (Science + Lab) ¹	4
Credits Subtotal		16.0

Year Three

Term 1		Credits
HF 300	Human Factors I: Principles and Fundamentals	3
MA 345	Differential Equations and Matrix Methods	4
SYS 301	Introduction to Systems Engineering	3
SYS 302	System Engineering Design Considerations	3
	Technical Elective ²	3
Credits Subtotal		16.0

Term 2

HF 312	Ergonomics and Bioengineering	3
SYS 303	Optimization in Systems Engineering	3
SYS 304	Trade Studies, Risk and Decision Analysis	3
	SYS Technical Elective 300-level	3
	SYS Technical Elective 300-level	3
Credits Subtotal		15.0

Year Four

Term 1

SYS 401	Systems Modeling and Simulation	3
SYS 402	Optimization in Systems Engineering II	3
SYS 403	Systems Engineering Life Cycle Costing	3
SYS 417	Systems Engineering Capstone Project I	3
	SYS Technical Elective 400-level	3
Credits Subtotal		15.0

Term 2

SYS 415	Systems Engineering Practices: Specialty Engineering	3
SYS 418	Systems Engineering Capstone Project II	3
	SYS Technical Elective 400-level	3
	Technical Elective ²	3
	Upper-level Humanities or Social Sciences	3
Credits Subtotal		15.0
Credits Total:		125.0

¹ Technical Elective (Science): Science course with a lab (4 credits).
 BIO 120 and BIO 120L / CHM 110 and CHM 110L / PS 228 and PS 228L / PS 250 and PS 253

² Technical Elective: CEC/CS/EE/SE/SYS/ME/AE/CE Upper-Level Elective (3 credits)