Systems Engineering and Design Curriculum Map

COURSE (credit hours)
Official Course Name (Hyperlinks to new page)

Prerequisite
Take before the semester

Credit/Concurrent
Take during the semester or have credit for

Co-requisite
Take during the same semester

Freshman		Sophomore		Junior		Senior	
Fall	**Spring**	**Fall**	**Spring**	**Fall**	**Spring**	**Fall**	**Spring**
MATH 221 (4) *Calculus I*	MATH 231 (3) *Calculus II*	MATH 241 (4) *Calculus III*	**MATH 285 (3)** *Intro Differential Equations*	MATH 415 (3) *Applied Linear Algebra*	IE 310 (3) *Operations Research*	SFO (3) *Secondary Field Option*	SFO (3) *Secondary Field Option*
CHEM 102 (3) *General Chemistry I*	PHYS 211 (4) *University Physics: Mechanics*	PHYS 212 (4) *University Physics: Elec & Mag*	PHYS 213 (2) *Univ Physics: Thermal Physics*	SFO (3) *Secondary Field Option*	SE 311 (3) *Engineering Design Analysis*	Eng Sci Elec (3) *Engineering Science Elective*	Free Elec (3) *Free Elective*
CHEM 103 (1) *General Chemistry Lab I*	**CS 101 (3)** *Intro Computing: Engrg & Sci*	TAM 211 (3) *Statics*	IE 300 (3) *Analysis of Data*	SE 310 (3) *Design of Strucutres and Mechanisms*	SE 312 (1) *Instrumentation and Test Lab*	Design Elec (3) *Design Elective*	Free Elec (3) *Free Elective*
ENG 100 (0) *Engineering Orientation*	ECE 110 (3) *Intro Elec & Computer Engrg*	SE 261 (1) *Business Side of Engineering*	TAM 251 (3) *Introductory Solid Mechanics*	**SE 320 (4)** *Control Systems*	SE 424 (3) *State Space Deisgn for Control*	SE 494 (3) *Senior Engineering Project I*	SFO (3) *Secondary Field Option*
SE 100 (1) *Introduction to ISE*		LEE (3) *Liberal Education Elective*	**TAM 212 (3)** *Introductory Dynamics*	**ECE 211 (2)** *Analog Circuits & Systems*	TAM 335 (4) *Introductory Fluid Mechanics*	SE 495 (2) *Senior Engineering Project II*	LEE (3) *Liberal Education Elective*
RHET 105 (4) *Principles of Composition*	SE 101 (3) *Engineering Graphics & Design*		SE 290 (0) *Undergraduate Seminar*		LEE (3) *Liberal Education Elective*	LEE (3) *Liberal Education Elective*	
LEE (3) *Liberal Education Elective*			LEE (3) *Liberal Education Elective*				

SE 320 (4)

http://coecsl.ece.illinois.edu/ge320/
https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SE/320

Fundamental control systems and control systems technology. Sensors, actuators, modeling of physical systems, design and implementation of feedback controllers; operational techniques used in describing, analyzing and designing linear continuous systems; Laplace transforms; response via transfer functions; stability; performance specifications; controller design via transfer functions; frequency response; simple nonlinearities. Credit is not given for both SE 320 and either AE 353 or ME 340. Prerequisite: CS 101, MATH 285, and TAM 212; credit or concurrent registration in ECE 211. Offered Fall only.