# 2017-2018 Systems Engineering BS: 4 YR. SEQUENCE

## FALL CLASSES

### FALL: First Semester (17 hours)
- SYEN 1210 Intro to Systems Engineering (First Year Experience)
- SYEN 1207 Intro to Mechanical Eng.
- SYEN 1301 Intro to Computer Systems
- MATH 1451 Calculus
- Core: Communications - Written
- Core: U. S. Traditions

### FALL: Second Semester (15-16 hours)
- PHYS 2321/2121 Physics for Scientists and Engineers I and Lab
- CHEM 1406 Engineering Chem or CHEM 1402 General Chem I
- MATH 1452 Calculus II
- Core: Communications – Written

### FALL: Third Semester (17 hours)
- SYEN 1302 C/C++ Programming for Engineers and Scientists
- PHYS 2322/2122 Physics for Scientists and Engineers II
- MATH 2453 Calculus III
- Core: Social Science
- Core: Fine Arts

### FALL: Fourth Semester (17-18 hours)
- SYEN 2315 Circuits and Systems
- SYEN 2115 Circuits and Systems Laboratory
- SYEN 2110 Computational Engineering Laboratory
- MATH 3322 Introduction to Differential Equations
- Core: Humanities: PHIL 2321

### FALL: Fifth Semester (16-17 hours)
- SYEN 3316 Discrete Events Systems Modeling and Simulation
- MATH 3312 Linear Algebra

### FALL: Sixth Semester (16-17 hours)
- SYEN 3320 Systems Engineering Design and Analysis
- SYEN 3312 Optimization Methods in Systems Engineering

### FALL: Seventh Semester (16-17 hours)
- SYEN 4185 Systems Engineering Capstone Design I
- SYEN 3318 Decision and Risk Analysis
- SYEN X3XX Major Elective
- SYEN X3XX Major Elective
- Core: History of Civilization

### FALL: Eighth Semester (12-15 hours)
- SYEN 4386 Systems Engineering Capstone Design II
- SYEN 3301 Engineering Economy
- SYEN X3XX Major Elective
- SYEN X3XX Major Elective

## SPRING CLASSES

### SPRING: Second Semester (15-16 hours)
- SYEN 2117 Manufacturing Processes Lab

### SPRING: Fourth Semester (17-18 hours)
- SYEN 2315 Circuits and Systems
- SYEN 2115 Circuits and Systems Laboratory
- SYEN 2110 Computational Engineering Laboratory
- MATH 3322 Introduction to Differential Equations
- Core: Humanities: PHIL 2321

### SPRING: Sixth Semester (16-17 hours)
- SYEN 3320 Systems Engineering Design and Analysis
- SYEN 3312 Optimization Methods in Systems Engineering

### SPRING: Eighth Semester (12-15 hours)
- SYEN 4386 Systems Engineering Capstone Design II
- SYEN 3301 Engineering Economy
- SYEN X3XX Major Elective
- SYEN X3XX Major Elective

## OPTION REQUIREMENT

### Mechanical
- SYEN 2117 Manufacturing Processes Lab

## 3-4 HOUR OPTION REQUIREMENT

### SPRING: Second Semester
- SYEN 3352 Analog and Digital /Lab
- SYEN 2370 Engineering Statics

### SPRING: Fourth Semester
- SYEN 3362 Algorithm Design

### SPRING: Sixth Semester
- SYEN 3364 Intro to Control Systems
- SYEN 4374 Fluid Mechanics/Lab

### SPRING: Eighth Semester
- SYEN 4331 Adv. Computer Architecture

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**Revised 1/19/17**