

ELECTRICAL & COMPUTER SYSTEMS ENGINEERING (ECSE)

FALL CLASSES

SPRING CLASSES

FALL: First Semester (16 hours)

- SYEN 1210 Introduction to Systems Engineering
- CHEM 1406 Engineering Chemistry
Or CHEM 1402 General Chemistry I
- MATH 1451 Calculus I
- Core: Communications - Written
- Core U.S. Traditions

SPRING: Second Semester (17 hours)

- SYEN 1301 Introduction to Computer Systems
- MATH 1452 Calculus II
- PHYS 2321/2121 Physics for Scientists and Engineers I and Lab
- Core: Communications - Written
- Core: History of Civilization

FALL: Third Semester (17 hours)

- SYEN 1302 C/C++ Programming for Engineers and Scientists
- MATH 2453 Calculus III
- PHYS 2322/2122 Physics for Scientists and Engineers II and Lab
- Core: Social Science
- Core: Fine Arts

SPRING: Fourth Semester (17 hours)

- SYEN 2110 Computational Engineering Laboratory
- SYEN 2315/2115 Circuits and Systems and Lab
- SYEN 3314 Probability Theory and Random Variables
- MATH 2310 Discrete Mathematics
- MATH 3322 Introduction to Differential Equations
- PHIL 2321 Professional Ethics (Core: Humanities)

FALL: Fifth Semester (17 hours)

- MATH 3312 Linear Algebra
- SYEN 3330/3130 Digital Systems and Lab
- SYEN 3350 Signals and Systems
- SYEN 3351 Network Analysis (Circuits and Systems II)
- SYEN 3352/3152 Analog and Digital Electronics and Lab

SPRING: Sixth Semester (17 hours)

- SYEN 3320 Systems Engineering Design and Analysis
- SYEN 3332 Communication Networks
- SYEN 3334/3134 Microprocessor Systems and Lab
- SYEN 3336 Computer Architecture
- SYEN 3354/3154 Digital & Analog Communication s and Lab

FALL: Seventh Semester (14 hours)

- SYEN 3301 Engineering Economy
- SYEN 3318 Decision and Risk Analysis
- SYEN 3356 Electromagnetic Fields and Waves
- SYEN 3358/3158 Fundamentals of Power Systems and Lab
- SYEN 4185 Systems Engineering Capstone Design I

SPRING: Eighth Semester (15 hours)

- SYEN 3312 Optimization Methods in Systems Engineering
- SYEN 3316 Discrete Event Systems Modeling and Simulation
- SYEN 3364 Introduction to Control Systems Engineering
- SYEN 4386 Systems Engineering Capstone Design II
- SYEN X3XX Major Elective