# ELECTRICAL & COMPUTER ENGINEERING: 4 YR. SEQUENCE

| FALL CLASSES | SPRING CLASSES |
|---|---|
| **_FALL: First Semester (16 hours)_** | **_SPRING: Second Semester (17 hours)_** |
| ☐ SYEN 1210 Introduction to Systems Engineering<br>☐ CHEM 1406 Engineering Chemistry<br>  Or CHEM 1402 General Chemistry I<br>☐ MATH 1451 Calculus I<br>☐ Core: Communications - Written<br>☐ Core U.S. Traditions | ☐ ECEG 1301 Introduction to Computer Systems<br>☐ MATH 1452 Calculus II<br>☐ PHYS 2321/2121 Physics for Scientists and Engineers I and Lab<br>☐ Core: Communications - Written<br>☐ Core: History of Civilization |
| **_FALL: Third Semester (17 hours)_** | **_SPRING: Fourth Semester (17 hours)_** |
| ☐ SYEN 1302 C/C++ Programming for Engineers and Scientists<br>  Or CPSC 1375 Programming I<br>☐ MATH 2453 Calculus III<br>☐ PHYS 2322/2122 Physics for Scientists and Engineers II and Lab<br>☐ Core: Social Science<br>☐ Core: Fine Arts | ☐ ECEG 2110 Computational Engineering Laboratory<br>☐ ECEG 2315/2115 Circuits and Systems and Lab<br>☐ SYEN 3314 Probability Theory and Random Variables<br>☐ MATH 2310 Discrete Mathematics<br>☐ MATH 3322 Introduction to Differential Equations<br>☐ PHIL 2321 Professional Ethics (Core: Humanities) |
| **_FALL: Fifth Semester (17 hours)_** | **_SPRING: Sixth Semester (16 hours)_** |
| ☐ MATH 3312 Linear Algebra<br>☐ ECEG 3330/3130 Digital Systems and Lab<br>☐ ECEG 3332 Communication Networks<br>☐ ECEG 3351 Network Analysis<br>☐ ECEG 3352/3152 Analog and Digital Electronics and Lab | ☐ SYEN 3301 Engineering Economy<br>☐ ECEG 3334/3134 Microprocessor Systems and Lab<br>☐ ECEG 3336 Computer Architecture<br>  Or CPSC 2482 Computer Organization<br>☐ ECEG 3350 Signals and Systems<br>☐ ECEG 3364 Introduction to Control Systems Engineering |
| **_FALL: Seventh Semester (15 hours)_** | **_SPRING: Eighth Semester (15 hours)_** |
| ☐ ECEG 3354/3154 Digital & Analog Communication s and Lab<br>☐ ECEG 3356 Electromagnetic Fields and Waves<br>☐ ECEG 3358/3158 Fundamentals of Power Systems and Lab<br>☐ SYEN 4185 Systems Engineering Capstone Design I<br>☐ SYEN X3XX Major Elective | ☐ 3312 Optimization Methods in Systems Engineering<br>  Or SYEN 3316 Discrete Event Systems Modeling and Simulation<br>☐ SYEN 4386 Systems Engineering Capstone Design II<br>☐ SYEN X3XX Major Elective<br>☐ SYEN X3XX Major Elective<br>☐ SYEN X3XX Major Elective |