

## 2017-2018 MECHANICAL SYSTEMS ENGINEERING BS: 4 YR. SEQUENCE

### FALL CLASSES

#### **FALL: First Semester (15 hours)**

- SYEN 1210 Intro to Systems Engineering (First Year Experience)
- SYEN 1207 Intro to Mechanical Engineering
- CHEM 1406 Engineering Chemistry **OR** CHEM 1402 General Chemistry I
- MATH 1451 Calculus
- Core: Communications – Written (RHET 1311)

### SPRING CLASSES

#### **SPRING: Second Semester (15 hours)**

- SYEN 2117** Fabrication Lab I
- PHYS 2321/2121 Physics for Scientists and Engineers I and Lab
- MATH 1452 Calculus II
- Core: Communications – Written (RHET 1312)
- Core: U. S. Traditions (HIST 2321/2322 or POLS 1310)

#### **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: History of Civilization (HIST 1311/1312)

#### **SPRING: Fourth Semester (18 hours)**

- SYEN 2370 Engineering Statics
- SYEN 3314 Probability Theory and Random Variables or MATH 3350. Intro to Probability
- SYEN 3372. Engineering Materials
- MATH 3322 Introduction to Differential Equations
- Core: Fine Arts
- Core: Humanities (PHIL 2311)

#### **FALL: Fifth Semester (17 hours)**

- SYEN 2233. Solid Modeling and Design
- SYEN 3316 Discrete Events Systems Modeling and Simulation
- SYEN 3371 Engineering Dynamics
- SYEN 3378 Engineering Thermodynamics
- SYEN 3370. Vibrations I
- MATH 3312 Linear Algebra

#### **SPRING: Sixth Semester (15 hours)**

- SYEN 3320 Systems Engineering Design and Analysis
- SYEN 3312 Optimization Methods in Systems Engineering
- SYEN 4374. Fluid Mechanics
- SYEN 3379. Elements of Mechanical Design
- SYEN 3373. Introduction to the Mechanics of Materials

#### **FALL: Seventh Semester (17 hours)**

- SYEN 4185 Systems Engineering Capstone Design I
- SYEN 3318 Decision and Risk Analysis
- SYEN X3XX Major Elective
- SYEN X3XX Major Elective
- SYEN 4174 Mechanical Engineering Laboratory I
- SYEN 4379 Heat Transfer
- PHYS 3350 Electronics

#### **SPRING: Eighth Semester (16 hours)**

- SYEN 4386 Systems Engineering Capstone Design II
- SYEN 3301 Engineering Economy
- SYEN 3364 Intro to Control Systems Engineering
- SYEN 4176. Mechanical Engineering Laboratory II
- SYEN X3XX Major Elective
- SYEN X3XX Major Elective