## 2023-2024 MECHANICAL ENGINEERING BS: 4 YR. SEQUENCE

### FALL CLASSES

#### FALL: First Semester (15 hours)
- First Year Colloquium: SYEN 1210 Intro to Systems Engineering OR PEAW 1300 The First Year Experience OR ETME 1110
- MEEG 1207 Intro to Mechanical Engineering
- CHEM 1406 Engineering Chemistry OR CHEM 1402 General Chemistry I
- MATH 1451 Calculus
- Core: Communications – Written (RHET 1311)

#### FALL: Third Semester (17 hours)
- SYEN 1302 C/C++ Programming for Engineers and Scientists OR CPSC 1375 Programming I
- PHYS 2322/2122 Physics for Scientists and Engineers II
- MATH 2453 Calculus III
- Core: Social Science
- Core: History of Civilization (HIST 1311/1312)

#### FALL: Fifth Semester (17 hours)
- MEEG 2233 Solid Modeling and Design
- SYEN 3316 Discrete Events Systems Modeling and Simulation OR ETME 3312 Production Systems
- MEEG 3371 Dynamics I
- MEEG 3373 Mechanics of Materials I
- MEEG 3378 Thermodynamics I OR CNMG 3378 Engineering Thermodynamics
- MATH 3312 Linear Algebra

#### FALL: Seventh Semester (17 hours)
- MEEG 3318 Decision and Risk Analysis
- MEEG 4174 Mechanical Engineering Laboratory I
- MEEG 4185 Systems Engineering Capstone Design I
- MEEG 4379 Heat Transfer
- PHYS 3350 Electronics OR SYEN 4326 Measurement Techniques
- MEEG X3XX Major Elective¹
- MEEG X3XX Major Elective¹

### SPRING CLASSES

#### SPRING: Second Semester (15 hours)
- MEEG 2117 Fabrication Lab I OR ETME 2117 Manufacturing Processes Lab
- 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 2311/2312 or POLS 1310)

#### SPRING: Fourth Semester (18 hours)
- MEEG 2370 Engineering Statics OR CNMG 2370 Engineering Statics
- MEEG 3372. Engineering Materials
- STAT 3350. Intro to Probability or SYEN 3314 Probability Theory and Random Variables
- MATH 3322 Introduction to Differential Equations
- Core: Fine Arts
- Core: Humanities (PHIL 2321)

#### SPRING: Sixth Semester (15 hours)
- SYEN 3312 Optimization Methods in Systems Engineering
- MEEG 3320 Systems Engineering Design and Analysis
- MEEG 3370 Vibrations I
- MEEG 3374 Fluid Mechanics I
- MEEG 3379 Elements of Mechanical Design

#### SPRING: Eighth Semester (16 hours)
- SYEN 3301 Engineering Economy OR CNMG 3302 Engineering Economy
- MEEG 4176. Mechanical Engineering Laboratory II
- MEEG 4335. Mechatronics I OR ELEG 3364 Intro to Control Systems Engineering
- MEEG 4386 Systems Engineering Capstone Design II
- MEEG X3XX Major Elective¹
- MEEG X3XX Major Elective¹

130 credit hours (128 credits hours of required courses + 2 credit hours of FYC [SYEN 1210])

¹ These courses should be chosen from the following: SYEN 4182, SYEN 4282, MEEG 4315, SYEN 4320, SYEN 4325, MEEG 4327, SYEN 4329, SYEN 4350, MEEG 4371, MEEG 4372, MEEG 4374, SYEN 4375, MEEG 4376, SYEN 4380, SYEN 4381, SYEN 4383, MEEG 4384.

Students may choose up to six hours of upper-level courses from SYEN or CVCE. In unusual circumstances, three of these six hours may be chosen from a technical area outside engineering, such as ETME, CPSC, or PHYS with approval of the program faculty. At most, three of these six hours may be taken from either independent study or cooperative education.

Revised 8/15/2023