Technical Electives

**Artificial Intelligence**
EEE4773: Fundamentals of Machine Learning (3)
EEL3872: Artificial Intelligence Fundamentals (3)

**Astronomy**
AST3018: Astronomy and Astrophysics I (3)
AST3019: Astronomy and Astrophysics II (3)
AST3722C: Techniques of Observational Astronomy I (3)
AST4402: Galaxies and Cosmology (3)

**Biology**
BSC2010: Principles of Biology I (3)
BSC2010L: Principles of Biology I Lab (1)
BSC2011: Principles of Biology II (3)
BSC2011L: Principles of Biology II Lab (1)
BSC3096: Human Physiology (3)

**Biomechanics**
APK2100 or APK2105C: Human Anatomy/Physiology with Lab (4)
BME3234: Mechanical Behavior of Biological Tissues and Systems (3)
BME4621: Biomolecular Thermodynamics and Kinetics (3)
BME4632: Biomedical Transport Phenomena (3)
BME4931: Biomechanics of Human Movement (3)
EGM4592: Bio-Solid Mechanics (3)
EGM4853: Bio-Fluid Mechanics (3)
EML4930: Orthopedic Biomechanics (3)
EML4930: Microfluidics and BioMEMS (3)
EML4930: Cell Mechanics and Mechanobiology (3)
EML4930: Biological Control Systems (3)

**Business Administration**
FIN3403: Business Finance (4)
ISM3254: Business Systems I (2)
ISM3255: Business Systems II (2)
ISM4113: Business Systems Design and Applications (2)

**Chemistry**
BCH4024: Introduction to Biochemistry and Molecular Biology (4)
CHM2046: General Chemistry II (3)
CHM2046L: General Chemistry II Lab (1)
CHM2096: Chemistry for Engineers (3)
CHM2210: Organic Chemistry I (3)
CHM2211: Organic Chemistry II (3)
CHM3217: Biochemistry I (4)
CHM3218: Biochemistry II (4)

**Computer and Information Science**
CDA3101: Intro to Computer Organization (3)
COP2271L: MATLAB Lab (1)
COP2274: C++ Programming for Engineers (3)
COP3502C: Programming Fundamentals I (4)
COP3503C: Programming Fundamentals II (4)
COP3530: Data Structures and Algorithm (3)
COP4600: Operating Systems (3)
COT3100: Applications of Discrete Structures (3)
Digital Arts and Sciences
DIG3713: Game Content Production I (3)
DIG3715: Game Content Production II (3)
DIG3873: Game Systems Development I (3)
DIG3878: Game Systems Development II (3)
DIG4527C: Game Design and Production (3)

Electrical Engineering
EEE3308C: Electronic Circuits I (4)
EEE3396C: Solid-State Electronic Devices (4)
EEL3008: Physics of Electrical Engineering (3)
EEE4310: VLSI Circuits and Technology I (3)
EEL3112: Circuits II (3)
EEL3135: Intro to Signals and Systems (4)
EEL3211C: Basic Electric Energy Engineering (4)
EEL3701C: Digital Logic & Computer Systems (4)

Engineering Leadership, Entrepreneurship, and Innovation
EGN4641: Engineering Entrepreneurship (3)
EGN4643: Engineering Innovation (3)
EGS4038: Engineering Leadership (3)
EGS4625: Engineering Project Management (3)
EGS4680: Advanced Engineering Leadership (3)
EGN6640: Entrepreneurship for Engineers (3) [Graduate Course]
EGN6642: Engineering Innovation (3) [Graduate Course]
EGS6039: Engineering Leadership (3) [Graduate Course]
Materials Science and Engineering
EMA3011: Fundamentals Principles of Materials (3)
EMA3050: Introduction to Inorganic Materials (3)
EMA3066: Introduction to Organic Materials (3)
EMA3413: Electronic Properties of Materials (3)
EMA4125: Transport Phenomena in Materials Processing (3)
EMA4223: Mechanical Behavior of Materials (3)

Mathematics
MAA4211: Advanced Calculus I (3)
MAA4212: Advanced Calculus II (3)
MAD4401: Intro to Numerical Analysis (3)
MAP4305: Differential Equations for Engineers and Physical Scientists (3)
MHF4102: Elements of Set Theory (3)
MAS4105: Linear Algebra I (4)
STA3032: Engineering Statistics (3)
STA4210: Regression Analysis (3)
STA4321: Intro to Probability (3)

Packaging Science
PKG3001: Principles of Packaging (3)
PKG4008: Distribution and Transport Packaging (3)
PKG4011: Packaging Production and Processing (3)
PKG4101C: Computer Tools for Packaging (3)

Physics
PHY3101: Intro to Modern Physics (3)
PHY3221: Mechanics I (3)
PHY3323: Electromagnetism I (3)
PHY3513: Thermal Physics (3)
PHY4222: Mechanics II (3)
PHY4324: Electromagnetism II (3)
PHY4604: Quantum Mechanics I (3)

**Sales Engineering**
EGN4930: Sales Engineering Seminar (1)
EIN3354: Engineering Economy (3)

**Work Experience**
EAS4905/EML4905: Independent Study (1-3 per semester)
EAS4949/EML4949: Engineering Co-op (1 per semester)
EGN4912: Engineering Research (1-3 per semester)
EML4930: Industry Practicum (3)
EML4945: Engineering Internship (1 per semester)

**Notes**
Technical electives can double-count as minor or certificate courses. However, they cannot double-count toward other Aerospace or Mechanical Engineering degree requirements.

Retroactive credit will not be granted for prior research, internship, or co-op experiences. Students must register for credit in the term in which they are actively working.

A maximum of three internship credits will count toward the degree. A maximum of eight combined internship/co-op/research credits will count toward the degree.