Technical Electives

READ ME

Technical electives can double-count toward **minor** or **certificate** courses. However, they **cannot** double-count toward other Aerospace or Mechanical Engineering degree requirements (ex. One course **cannot** count as both a science elective requirement and a technical elective requirement).

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

A maximum of **three** credits of internships will count toward the degree. A maximum of eight *combined* internship, co-op, & research credits will count toward the degree.

If you take a course listed here and it **does not fall automatically** into your Degree Audit, email advising@mae.ufl.edu and we will move it for you. Courses **not listed below** will need to be petitioned using the Petition to Substitute for a Required Course.

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)

See **READ ME** note on first page

Technical Electives

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)

EGM4590 - Biodynamics (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)

Technical Electives

Computer and Information Science

CDA3101: Intro to Computer Organization (3)

COP2271L: MATLAB Lab (1)

COP2273: Python Programming for Engineers (3)

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)

See **READ ME** note on first page

Technical Electives

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)

See **READ ME** note on first page

Technical Electives

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) *Click for info*

EGN4912: Engineering Research (1-3 per semester) *Click for info*

EML4945: Engineering Internship (1 per semester) *Click for info*

Additional

EML4842: Autonomous Vehicles (3)

See **READ ME** note on first page