Technical Elective Suggestions for EVEN Students

Approved Technical Elective Courses for EVEN are listed below. We accept all upper level (3000 or higher) ENG coded classes as well, except for EMEN. Please refer to the list below. If a course is not on this list, you may request approval on a petition form. Honors sections of the courses listed below will also be accepted. Check for prerequisites with your advisor and in the catalog: https://catalog.colorado.edu/.
Some graduate-level classes (5000+) can also be taken as technical electives -- check with your advisor. Note, however, that prerequisites are not listed in the catalog for graduate courses; instructor's permission may be required.
Courses marked with an asterisk (*) fulfill the earth sciences technical elective requirement (geology,meteorology,or soil science.)

Arts & Sciences College

AIRR 3010 (3) Air Force Leadership Studies I

APPM 3010 (3) An Introduction to Nonlinear Systems: Chaos
APPM 3050 (3) Scientific Computing in Matlab
APPM 3170 (3) Discrete Applied Mathematics
APPM 3310 (3) Matrix Methods and Applications
APPM-3350 (3) Advanced Engineering Calculus
APPM 3570 (3) Applied Probability
APPM 4120 (3) Introduction to Operations Research
APPM 4350 (3) Methods in Appl Math: Fourier Series/Boundary Value Prob
APPM 4360 (3) Methods in Appl Math: Complex Variables & Appl
APPM 4380 (3) Modeling in Applied Mathematics
APPM-4390 (3) Modeling in Mathematical Biology
APPM-4440 (3) Undergraduate Applied Analysis 1
APPM 4540 (3) Introduction to Time Series
APPM-4450 (3) Undergraduate Applied Analysis 2
APPM 4560 (3) Markov Processes, Queues, Monte Carlo Sims
APPM 4580 (3) Statistical Applications: Software & Methods
APPM 4650 (3) Intermediate Numerical Analysis 1
APPM 4660 (3) Intermediate Numerical Analysis 2
APPM 4720 (3) Open Topics in Applied Mathematics

ASTR 1030 (4) Accelerated Intro Astronomy 1
ASTR 3830 (3) Astrophysics 2 - Galactic and Extragalactic
ASTR 4330 (3) Cosmochemistry

ATOC 1050 (3) Weather and the Atmosphere *
ATOC 1060 (3) Our Changing Environment: El Nino, Ozone and Climate *
ATOC 1070 (1) Weather and the Atmosphere Lab
ATOC/GEOL 3070 (3) Introduction to Oceanography *
ATOC 3050 (3) Principles of Weather
ATOC 3180 (3) Aviation Meteorology *
ATOC 3300 (3) Analysis of Climate and Weather Observation *
ATOC 3500/CHEM 3151 (3) Air Chemistry and Pollution *
ATOC 3600 (3) Principles of Climate *
ATOC/ASTR 3720 (3) Planets and Their Atmospheres
ATOC-4200 (3) Biogeochemical Oceanography
ATOC 4500 (1-3) Special Topics in Atmospheric and Oceanic Sciences
ATOC 4500 (3) Boundary Layer Meteorology
ATOC 4500 (3) The Physics and Chemistry of Clouds & Aerosols
ATOC 4550 (3) Mountain Meteorology
ATOC 4700 (3) Weather Analysis and Forecasting
ATOC 4720 (3) Intro to Atmospheric Physics & Dynamics *
ATOC 4750 (3) Desert Meteorology and Climate *

CHEM 3151/ATOC 3500 (3) Air Chemistry and Pollution
CHEM 3311 (4) Organic Chemistry 1
CHEM 3321 (1) Lab in Organic Chemistry 1
CHEM 3331 (4) Organic Chemistry 2
CHEM 4011 (3) Modern Inorganic Chemistry
CHEM 4021 (3) Inorganic Laboratory
CHEM-4131 (3) Chemistry of Global Health
CHEM 4141 (3) Environmental Water and Soil Chemistry
CHEM 4171 (3) Instrumental Analysis
CHEM 4181 (4) Instrumental Analysis Lab with Environ Emphasis

CHEM 4261 (3) Organic Materials: Structures and Functions
CHEM 4271 (3) Chemistry of Solar Energy
CHEM 4531 (3) Physical Chemistry 2
CHEM 4581 (1) Physical Chemistry Lab 1
CHEM 4591 (2) Physical Chemistry Lab 2
CHEM 4611 (3) Survey of Biochemistry
CHEM 4731 (3) General Biochemistry 2
CHEM 4761 (4) Biochemistry Laboratory

EBIO 1030 (3) Biology: A Human Approach 1
EBIO 1040 (3) Biology: A Human Approach 2
EBIO 1050 (1) Biology: A Human Approach Laboratory
EBIO 1210 (3) General Biology 1
EBIO 1220 (3) General Biology 2
EBIO 1230 (1) General Biology Laboratory 1
EBIO 1240 (1) General Biology Laboratory 2
EBIO 1300 (1-3) Topics in Biological Sciences
EBIO 2010 (1-3) Environmental Issues and Biology
EBIO 2040 (4) Principles of Ecology
EBIO 2070 (4) Genetics: Molecules to Populations
EBIO-2090 (3) Tropical Island and Marine Ecology
EBIO-2091 (1) Marine Ecology, Oceanography and Island Ecology Field Studies
EBIO 3010 (1-2) Teaching Biology
EBIO 3040 (4) Conservation Biology
EBIO 3080 (4) Evolutionary Biology
EBIO 3180 (3) Global Ecology
EBIO 3190 (3) Tropical Marine Ecology
EBIO 3240 (4) Animal Behavior
EBIO 4155 (3) Ecosystem Ecology
EBIO 3850 (4) Animal Diversity: Invertebrates
EBIO 4030 (3) Limnology
EBIO 4050 (4) Fish Biology
EBIO 4060 (3) Landscape Ecology
EBIO 4090 (2) Coral Reef Ecology
EBIO 4100 (3) Advanced Ecology
EBIO 4120 (2-4) Advanced Ecology
EBIO 4140 (3) Plant Ecology
EBIO 4290 (3) Molecular Systematics and Evolution
EBIO 4410 (4) Biometry

EBIO 4460 (3) Mycology
EBIO 4500 (4) Plant Biodiversity and Evolution
EBIO 4510 (4) Plant Anatomy and Development
EBIO 4520 (4) Plant Systematics
EBIO 4640 (2-4) Plant Field Studies
EBIO 4660 (4) Insect Biology
EBIO 4750 (4) Ornithology
EBIO 4760 (4) Mammalogy

EBIO 4800 (3) Ecological Resilience

ENVS 1000 (4) Introduction to Environmental Studies
ENVS/EBIO 3040 Conservation Biology
ENVS/PHYS 3070 (3) Energy and the Environment
ENVS 3520 (3) Energy and Climate Change: An Interdisciplinary Approach
ENVS 3022 (3) Climate Politics and Policy
ENVS 3525 (3) Int Env Problem Analysis: Topical Cornerstones
ENVS/ATOC 3600/GEOG 3601 Principles of Climate
ENVS-3621 (3) Energy Policy and Society
ENVS 4050 (3) Field Studies in Environmental Sciences
ENVS/GEOL/EBIO 4160 Intro to Biogeochemistry*
ENVS/GEOG 4201 Biometeorology

GEOG 1001 (4) Environ'l Systems 1- Climate & Vegetation *
GEOG 1011 (4) Environ'l Systems 2 - Landscapes and Water *
GEOG 2053 (4) Mapping a Changing World
GEOG 2421 (3) Visualizing Climate Change
GEOG 3053 (3) Cartography: Visualization and Information Design
GEOG 3251 (3) Mountain Geosystems *
GEOG 3351 (3) Biogeography
GEOG 3412 (3) Conservation Practice and Resource Management
GEOG 3601 (3) Principles of Climate *
GEOG 3662 (3) Economic Geography
GEOG 3682 (3) Geography of International Development
GEOG 4001 (3) Topics in Physical Geography: Climate Change Cause & Impacts
GEOG 4022/MCEN 4228: Climate Action Planning: Reducing CU Boulder's Emissions
GEOG 4023 (3) Introduction to Quantitative Methods in Human Geography
GEOG 4093 (4) Remote Sensing of the Environment
GEOG-4103 (4) Introduction to Geographic Information Science
GEOG 4110 (3) Sp.Topics: GIS in the Social and Natural Sciences
GEOG/ENVS 4201 (3) Biometeorology *
GEOG 4203 (4) Geographic Information Science: Modeling Appl
GEOG 4241 (4) Principles of Geomorphology *
GEOG 4303 (4) GIS: Programming for Spatial Analysis
GEOG 4311 (3) Watershed Biogeochemistry
GEOG 4321 (3-4) Snow Hydrology
GEOG 4371 (3) Forest Geography: Principles and Dynamics
GEOG 4401 (3) Soils Geography *
GEOG 4501 (3) Water Resources & Water Management of Western US
GEOG 4603 (3) GIS-Social and Natural Sciences
GEOG-4722 (3) Field Methods in Human Geography

****Note AY 2026-27 GEOL is now listed as ERTH**

GEOL 1010 (3) Introduction to Geology 1 *
GEOL 1020 (3) Introduction to Earth History*
GEOL 1030 (1) Introduction to Geology Laboratory 1 *
GEOL 1040 (3) Geology of Colorado *
GEOL 1060 (3) Global Change--an Earth Science Perspective *
GEOL 1150 (3) Water, Energy & Environment: An Intro To Earth Resources*
GEOL-2001 (4) Planet Earth
GEOL-2005 (4) Introduction to Earth Materials

GEOL/ASTR 2040 (3) The Search for Life in the Universe
GEOL 2100 (3) Environmental Geology *
GEOL 2700 (2) Introduction to Field Geology *
GEOL 3010 (3) Introduction to Mineralogy *
GEOL 3020 (3) Petrology*
GEOL 3030 (3) Introduction to Hydrogeology *
GEOL 3040 (3) Global Change: The Recent Geological Record *
GEOL 3050 (2) GIS for Geologists *
GEOL/ATOC 3070 (3) Introduction to Oceanography *
GEOL 3120 (4) Structural Geology *
GEOL 3320 (3) Introduction to Geochemistry *
GEOL 3410 (3) Paleobiology *
GEOL 3430 (4) Sedimentology and Stratigraphy *
GEOL 3520 (3) Energy and Climate Change: An Interdisciplinary Approach
GEOL 3720 (3) Evolution of Life: The Geological Record *
GEOL 3820 (3) The Fluid Earth *
GEOL 3950 (3) Natural Catastrophes & Geologic Hazards *
GEOL 4093 (4) Remote Sensing of the Environment
GEOL 4130 (3) Principals of Geophysics *
GEOL 4241 (4) Principles of Geomorphology *
GEOL 4270 (3) Marine Chemistry and Geochemistry
GEOL-4330 (3) Cosmochemistry
GEOL 4474 (4) Vertebrate Paleontology
GEOL 4670 (3) Isotope Geology *
GEOL 4711 (2) Igneous and Metamorphic Field Geology *
GEOL 4712 (2) Structural Field Geology *
GEOL 4714 (2) Field Geophysics *
GEOL 4715 (2) Field Techniques in Hydrogeology*
GEOL 4716 (2) Environmental Field Geochemistry *
GEOL 4717 (2) Field Seminar in Geology and Tectonics *
GEOL-4721 (2) Field Methods in Active Tectonics

IPHY 2420 (3) Nutrition, Health and Performance
IPHY 3060 (4) Cell Physiology
IPHY 3410 (3) Introduction to Human Anatomy
IPHY 3415 (2) Human Anatomy Laboratory
IPHY 3430 (3) Introduction to Human Physiology
IPHY 3435 (2) Human Physiology Laboratory
IPHY 3470 (3) Human Physiology 1
IPHY 3480 (3) Human Physiology 2
IPHY 3660 (3) Dynamics of Motor Learning
IPHY 4200 (3) Physiological Genetics and Genomics
IPHY 4440 (3) Endocrinology
IPHY 4470 (3) Biology of Human Reproduction
IPHY 4540 (5) Biomechanics
IPHY 4600 (4) Immunology
IPHY 4650 (5) Exercise Physiology
IPHY 4720 (4) Neurophysiology

MATH 3110 (3) Introduction to Theory of Numbers
MATH-3120 (3) Functions and Modeling
MATH 3140 (3) Abstract Algebra 1
MATH 3170 (3) Combinatorics 1
MATH 3210 (3) Euclidean and Non-Euclidean Geometries
MATH 3450 (3) Partial Differential Equations 1
MATH 4000 (3) Foundations of Mathematics
MATH 4001 (3) Analysis II
MATH 4120 (3) Introduction to Operations Research
MATH 4140 (3) Abstract Algebra 2
MATH 4200 (3) Introduction to Topology
MATH 4230 (3) Geometry of Curves and Surfaces
MATH 4330 (3) Fourier Analysis
MATH 4440 (3) Mathematics of Coding and Cryptography
MATH 4450 (3) Introduction to Complex Variables
MATH 4510 (3) Introduction to Probability Theory
MATH 4520 (3) Introduction to Mathematical Statistics
MATH 4540 (3) Introduction to Time Series
MATH 4650 (3) Intermediate Numerical Analysis 1
MATH 4660 (3) Intermediate Numerical Analysis 2
MATH 4730 (3) Set Theory

MCDB 1041 (3) Fundamentals of Human Genetics MCDB 1150 (3) Introduction to Cellular and Molecular Biology
MCDB 1151 (1) Introduction to Cell and Molecular Biology Lab
MCDB-1152 (1) Problem Solving Co-Seminar for Introduction to Molecular and Cellular Biology
MCDB 1161 (2) From Dirt to DNA: Phage Genomics Laboratory I
MCDB 2161 (2) From DNA to Genes, Phage Genomics Laboratory II
MCDB 2150 (3) Principles of Genetics
MCDB 2151 (1) Principles of Genetics Laboratory
MCDB 3135 (3) Molecular Cell Biology I
MCDB 3140 (2) Cell Biology Laboratory
MCDB 3150 (3) Biology of the Cancer Cell
MCDB 3350 (3) Fertility, Sterility, and Early Mammalian Development
MCDB 3501 (3) Structural Methods for Biological Macromolecules
MCDB 3650 (3) The Brain - From Molecules to Behavior
MCDB 3651 (3) The Brain: Dysfunction to Disease MCDB 3990 (3) Introduction to Systems Biololgy for Biologists
MCDB 4201 (3) From Bench to Bedside: The Role of Science in Medicine
MCDB 4300 (3) Immunology
MCDB 4314 (3) Algorithms for Molecular Biology
MCDB 4361 (3) Evolution and Development
MCDB 4410 (3) Human Molecular Genetics
MCDB 4425 (3) Cellular Stress Responses: Molecular Mechanisms, Physiology, and Human Diseases
MCDB 4426 (3) Cell Signaling and Developmental Regulation
MCDB 4427 (3) Biology of the Visual System
MCDB 4444 (3) Cellular Basis of Disease
MCDB 4471 (3) Mechanisms of Gene Regulation in Eukaryotes
MCDB 4520 (3) Bioinformatics and Genomics
MCDB 4550 (3) Cells, Molecules and Tissues: A Biophysical Approach
MCDB 4615 (3) Biology of Stem Cells
MCDB 4650 (3) Developmental Biology
MCDB 4680 (3) Mechanisms of Aging
MCDB 4750 (3) Animal Virology MCDB 4777 (3) Molecular Neurobiology
MCDB 4790 (3) Experimental Embryology
MCDB 4811 (3-4) Teaching and Learning Biology

PHYS 1230 (3) Light and Color for Nonscientists
PHYS 1240 (3) Sound and Music
PHYS 2130 (3) General Physics 3
PHYS-2150 (1) Experimental Physics
PHYS 2170 (3) Foundations of Modern Physics
PHYS 2210 (3) Classical Mechanics and Math Methods 1
PHYS-3000 (3) Science and Public Policy
PHYS/ENVS 3070 (3) Energy and the Environment
PHYS 3210 (3) Classical Mechanics and Mathematical Methods 2
PHYS 3220 (3) Quantum Mechanics and Atomic Physics 1
PHYS 3310 (3) Principles of Electricity and Magnetism 1
PHYS 3320 (3) Principles of Electricity and Magnetism 2
PHYS 3330 (2) Electronics for the Physical Sciences
PHYS 4130 (2) Biological Electron Microscopy
PHYS 4150 (3) Plasma Physics
PHYS 4230 (3) Thermodynamics and Statistical Mechanics PHYS 4340 (3) Introduction to Solid State Physics
PHYS 4410 (3) Quantum Mechanics and Atomic Physics 2
PHYS 4420 (3) Nuclear and Particle Physics
PHYS 4510 (3) Optics

College of Engineering and Applied Science

All upper level (3000 or higher) ENG coded classes accepted, except for EMEN please see list below

AREN 1027 (3) Engineering Drawing (formerly AREN 1017)
AREN 2050 (3) Building Materials and Systems
ASEN/ATOC 4215 (3) Oceanography *

CHEN 2810 (3) Biology for Engineers

CVEN 2012 (3) Introduction to Geomatics
CVEN 3698 (3) Engineering Geology *
CVEN 3708 (3) Geotechnical Engineering 1 *
CVEN 3718 (3) Geotechnical Engineering 2 *

CSCI 1240 (3) The Computational World
CSCI 1300 (4) Computer Science 1: Starting Computing
CSCI 2270 (4) Computer Science 2: Data Structures
CSCI 2400 (4) Computer Systems
CSCI 2820 (3) Linear Algebra with Computer Science Applications
CSCI 2824 (3) Discrete Structures
CSCI 2830 (1-3) Special Topics in Computer Science

ECEN 1310 (4) C and MATLAB Programming for Electrical and Computer Engineers
ECEN 1400 (3) Introduction to Digital and Analog Electronics
ECEN 2060 (3) Sp Top: Renewable Energy
ECEN 2250 (3) Introduction to Circuits and Electronics
ECEN 2270 (3) Electronics Design Lab
ECEN 2350 (3) Digital Logic
ECEN 2410 (3) Renewable Sources and Efficient Electrical Energy Systems
ECEN 2703 (3) Discrete Mathematics for Computer Engineers

EMEN 4030 (3) Project Management Systems
EMEN 4050 (3) Leadership and Professional Skills
EMEN 4200 (3) Technology and Entrepreneurship for the Developing World
EMEN 4400 (3) Quality Management for Engineers
EMEN 4405 (3) Fundamental of Systems Engineering
EMEN 4800 (3) Technology Ventures and Marketing
EMEN 4820 Entrepreneurial Product Development
EMEN 4825 (3) Entrepreneurial Business Plan Preparation
EMEN 4830 (3) Entrepreneurial Management and Leadership
EMEN 4830 (3) Principles and Practices of the Sustainable Enterprise
EMEN 4830 (3) Resilience Engineering Management
EMEN 4600 (3) Energy Engineering Projects
EMEN 5830 (3) Principles and Practices for Sustainable Enterprise

EVEN 2840 (1-3) Independent Study

GEEN 1017 (3) CAD course
GEEN 2010 (3) Engineering Tools and Analysis

MCEN 1025 (3) Computer-Aided Design and Fabrication
MCEN 2024 (3) Materials Science
MCEN 2063 (3) Mechanics of Solids