



CONSTRUCTION ENGINEERING

COLORADO STATE UNIVERSITY

Technical Electives

Code	Title	Credits
BC 351	Principles of Biochemistry	4
CHEM 245	Fundamentals of Organic Chemistry	4
CHEM 341	Modern Organic Chemistry I	3
CIVE 305	Intermediate AutoCAD	3
CIVE 330	Ecological Engineering	3
CIVE 405	Sustainable Civil/Environmental Engineering	3
CIVE 413	Environmental River Mechanics	3
CIVE 423	Groundwater Engineering	3
CIVE 437	Wastewater Treatment Facility Design	3
CIVE 439	Applications of Environmental Engr Concepts	3
CIVE 440	Nonpoint Source Pollution	3
CIVE 442	Air Quality Engineering	3
CIVE 455	Applications in Geotechnical Engineering	3
CIVE 458	Environmental Geotechnics	3
CIVE 502	Fluid Mechanics	3
CIVE 505	Structural Inspection, Management and Repair	3
CIVE 507	Transportation Engineering	3
CIVE 508	Bridge Engineering	3
CIVE 510	Applied Hydraulic System Design	3
CIVE 511	Coastal Engineering	3
CIVE 512	Irrigation Systems Design	3
CIVE 513	Morphodynamic Modeling	3
CIVE 514	Hydraulic Structures/Systems	3
CIVE 519	Irrigation Water Management	3
CIVE 520	Physical Hydrology	3
CIVE 521	Hydrometry	3
CIVE 524/WR 524	Modeling Watershed Hydrology	3
CIVE 525	Water Engineering International Development	3
CIVE 529	Environmental Organic Chemistry	3
CIVE 530	Environ Engr at the Water-Energy-Health Nexus	3
CIVE 531	Groundwater Hydrology	3
CIVE 533/BIOM 533	Biomolecular Tools for Engineers	3
CIVE 538	Aqueous Chemistry	3
CIVE 540/CBE 540	Advanced Biological Wastewater Processing	3
CIVE 541	Physical Chemical Water Treatment Processes	3
CIVE 542	Water Quality Modeling	3
CIVE 544	Water Resources Planning and Management	3
CIVE 547/STAT 547	Statistics for Environmental Monitoring	3
CIVE 549	Drainage and Wetland Engineering	3
CIVE 550	Foundation and Retaining Wall Engineering	3
CIVE 555	Mining Geotechnics	3
CIVE 556	Slope Stability, Seepage, and Earth Dams	3
CIVE 558	Containment Systems for Waste Disposal	3
CIVE 559	Special Topics in Geotechnical Engineering	3
CIVE 560	Advanced Mechanics of Materials	3
CIVE 561	Advanced Steel Behavior and Design	3
CIVE 562	Fundamentals of Vibrations	3
CIVE 565	Finite Element Method	3
CIVE 566	Intermediate Structural Analysis	3
CIVE 567	Advanced Concrete Design	3
CIVE 568	Design of Masonry and Wood Structures	3
CIVE 571	Pipeline Engineering and Hydraulics	3
CIVE 572	Analysis of Urban Water Systems	3
CIVE 573	Urban Stormwater Management	3
CIVE 574	Civil Engineering Project Management	3
CIVE 575	Sustainable Water and Waste Management	3
CIVE 576	Engineering Applications of GIS and GPS	3
CIVE 578	Infrastructure and Utility Management	3
CON 370	Asphalt Pavement Materials and Construction	3
ENGR 550/ MATH 550	Numerical Methods in Science and Engineering	3
ERHS 446	Environmental Toxicology	3
FIN 305	Fundamentals of Finance	3
GEOL 442	Applied Geophysics	4
GR 323/NR 323	Remote Sensing and Image Interpretation	3
LIFE 320	Ecology	3
MATH 332	Partial Differential Equations	3
MATH 369	Linear Algebra I	3
MGT 305	Fundamentals of Management	3
MIP 300	General Microbiology	3
MKT 305	Fundamentals of Marketing	3
NR 319	Introduction to Geospatial Science	4