NATURAL RESOURCES-NR (NR)

Courses

NR 120A Environmental Conservation (GT-SC2) Credits: 3 (3-0-0)
Course Description: Overview of natural resources environmental concerns including population, pesticides, energy, and pollution.
Prerequisite: None.
Registration Information: Credit not allowed for both NR 120A and NR 120B. Sections may be offered: Online.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Biological & Physical Sciences 3A, Natural & Physical Sciences w/o lab (GT-SC2).

NR 120B Environmental Conservation Credits: 4 (3-3-0)
Course Description: Overview of natural resources environmental concerns including population, pesticides, energy, and pollution.
Prerequisite: None.
Registration Information: Participation in the University Honors Program required. Must register for lecture and laboratory. Credit not allowed for both NR 120B and NR 120A.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 130 Global Environmental Systems (GT-SC2) Credits: 3 (3-0-0)
Course Description: Studies of the Earth's lithosphere, hydrosphere, atmosphere, and biosphere systems and their interrelations with human dimensions.
Prerequisite: None.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Biological & Physical Sciences 3A, Natural & Physical Sciences w/o lab (GT-SC2).

NR 150 Oceanography (GT-SC2) Credits: 3 (3-0-0)
Course Description: Introduction to the geology, physics, chemistry, and biology of the world ocean; oceanic relationships with various human dimensions.
Prerequisite: None.
Registration Information: Sections may be offered: Online.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Biological & Physical Sciences 3A, Natural & Physical Sciences w/o lab (GT-SC2).

NR 182C Study Abroad: Oceanography Lab Credit: 1 (0-0-1)
Course Description: Witness first-hand the dynamic interactions between the ocean and land that shape the Baja California peninsula, separating the Sea of Cortez and the Pacific Ocean. The Sea of Cortez is one of the most diverse seas on Earth with a wide range of endemic and migratory species. The nutrient-rich Pacific Ocean is home to kelp beds and sandy beaches. Learn field-sampling techniques and explore various marine ecosystems.
Prerequisite: NR 150.
Registration Information: Written consent of instructor. The students go through an application process for education abroad and consent of the instructor is needed. Students need a minimum of a 2.5 GPA per Education Abroad standards.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 192 First Year Seminar in Environmental Studies Credits: 2 (0-0-2)
Course Description: Introduction to the disciplines involved in natural resources through exposure to current issues.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 193 FRS First Semester Seminar Credit: 1 (0-0-1)
Course Description: A first semester seminar for all new, incoming freshmen and transfer students with a major in the Department of Forest and Rangeland Stewardship. Students will be given an introductory overview of their field of study, while being introduced to departmental policies and processes, university resources with assistance from guest speakers, and possible career paths in their field with current professionals and class field trips.
Prerequisite: None.
Registration Information: Must be enrolled in one of the following majors: Forestry, Natural Resources Management, Rangeland Ecology, Forestry and Rangeland Stewardship, or Restoration Ecology. This is a partial semester course. Required field trips.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 220 Natural Resource Ecology and Measurements Credits: 5 (2-6-0)
Course Description: Ecology of Rocky Mountains ecosystems. Basic measurements and integrated management of natural resources.
Prerequisite: (BZ 110 and BZ 111 or BZ 120 or LIFE 103) and (MATH 118 or MATH 141 to 161 or MATH 229 to 499).
Registration Information: Required residence at CSU Mountain Campus. Must register for lecture and laboratory.
Term Offered: Summer.
Grade Mode: Instructor Option.
Special Course Fee: Yes.

NR 300 Biological Diversity Credits: 3 (3-0-0)
Course Description: Biological diversity examined in context of species; extinction. Principles, techniques of conservation biology utilized to understand and resolve issues.
Prerequisite: NR 120A or NR 120B or BZ 100 to 499 - at least 1 course or LIFE 100 to 499 - at least 1 course.
Registration Information: Credit allowed for only one of the following: FW 455, FW 555, or NR 300.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.
NR 310 Ecosystem Services and Human Well-Being Credits: 3 (3-0-0)
Course Description: Life-supporting and life-fulfilling benefits that nature provides to humans; theory, case studies, and policy.
Prerequisite: AREC 202 or ECON 202 or LAND 220 or LIFE 220 or ESS 211.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 319 Geospatial Applications in Natural Resources Credits: 4 (2-4-0)
Course Description: Introduction to global positioning systems (GPS), geographic information systems (GIS) and remote sensing (RS) with natural resource applications.
Prerequisite: None.
Restriction: Must be a: Junior.
Registration Information: Junior standing. Must register for lecture and laboratory. Required field trips.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 320 Natural Resources History and Policy Credits: 3 (3-0-0)
Course Description: History, values and institutions, and policy process guiding natural resources management and conservation.
Prerequisite: None.
Registration Information: Junior standing. Sections may be offered: Online.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Historical Perspectives 3D.

NR 322 Introduction to Geographic Information Systems Credits: 4 (2-4-0)
Course Description: Fundamental concepts of spatial data handling and computer-assisted map analysis.
Prerequisite: None.
Registration Information: Must register for lecture and laboratory. Credit not allowed for both NR 322 and GR 420.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 323 Remote Sensing and Image Interpretation Credits: 3 (2-2-0)
Also Offered As: GR 323.
Course Description: Remote sensing systems and applications; characteristics of photographic, scanner and radar images; imagery interpretation.
Prerequisite: None.
Registration Information: Must register for lecture and laboratory. Credit allowed for only one of the following: NR 323, NR 503, GR 323, GR 503.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 326 Forest Vegetation Management Credits: 3 (3-0-0)
Course Description: Ecologically-based management to restore and manage forests.
Prerequisite: NR 220.
Registration Information: Credit not allowed for both NR 326 and F 325.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 330 Human Dimensions in Natural Resources Credits: 3 (3-0-0)
Course Description: Social, political, cultural, and economic considerations in natural resource management.
Prerequisite: NR 120A or NR 120B.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 335 Contemporary Environmental Issues Credits: 3 (3-0-0)
Course Description: Fundamental concepts of energy, population, and ecology applied to range of contemporary environmental issues.
Prerequisite: BIO 100 to 481 - at least 1 course or BIO 100 to 481 - at least 1 course.
Registration Information: Written consent of instructor can substitute for biology course. Sections may be offered: Online.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 353 Global Change Ecology, Impacts and Mitigation Credits: 3 (3-0-0)
Also Offered As: BZ 353.
Course Description: Ecological impacts of human-induced global change, and the strategies that can/are being used to adapt to and mitigate these impacts.
Prerequisite: LIFE 320 or LIFE 220 or LAND 220.
Registration Information: Credit not allowed for both NR 353 and BZ 353.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 355 Environmental Education Credits: 3 (3-0-0)
Course Description: Principles of interpretation related to natural resource management and public informal education.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 365 Concepts in Vertebrate Nutrition Credits: 3 (3-0-0)
Course Description: Concepts in suborganismal and organismal vertebrate nutrition; introduction to nutritional ecology.
Prerequisite: CHEM 245.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 370 Coastal Environmental Ecology Credits: 3 (3-0-0)
Course Description: Sensitive and complex coastal area environments and the effects of accelerated change on and offshore caused by human activities.
Prerequisite: CHEM 107 or CHEM 113.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 375 Environment and Natural Resources Leadership Credit: 1 (1-0-0)
Course Description: Environment and natural resources leadership history, skills, and styles. Creation of leadership path and organization prescriptions.
Prerequisite: None.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 377 Pre-Internship Credit: 1 (1-0-0)
Course Description: Designed to prepare majors in Natural Resource Tourism and Human Dimensions of Natural Resources for experiential learning.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

NR 380 Spatial Analysis of Social Data Credits: 3 (2-2-0)
Course Description: Spatial analysis and analysis of socio-economic data; common themes related to land use and landscape change, parks & protected areas, and global tourism.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 382A Travel Abroad: Social-Ecological Field Methods in Kenya Credits: 5 (0-0-5)
Course Description: Social and ecological field methods commonly used in natural resource management.
Prerequisite: (BZ 110 and BZ 111 or BZ 120 or LIFE 103) and (MATH 118 or MATH 141 to 161 - at least 1 course or MATH 229 to 99999 - at least 1 course).
Registration Information: Study Abroad in Kenya.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 382B Travel Abroad: Social-Ecological Field Methods in Belize Credits: 5 (0-0-5)
Course Description: Social and ecological field methods commonly used in natural resource management.
Prerequisite: (BZ 110 and BZ 111 or BZ 120 or LIFE 103) and (MATH 118 or MATH 141 to 161 - at least 1 course or MATH 229 to 99999 - at least 1 course).
Registration Information: Study Abroad in Belize.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 383 U.S. Travel-Integrated Resource Management Credits: 2 (0-2-1)
Also Offered As: AGRI 383.
Course Description: Evaluation of integrated ranch management decision alternatives in conjunction with professional resource managers.
Prerequisite: None.
Registration Information: Must register for laboratory and recitation. Credit not allowed for both NR 383 and AGRI 383. Required field trips.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 387 Pre-Internship Credit: 1 (1-0-0)
Course Description: Designed to prepare majors in Natural Resource Tourism and Human Dimensions of Natural Resources for experiential learning.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

NR 400 Public Communication in Natural Resources Credits: 3 (1-0-2)
Course Description: Examine how public communication shapes opinion and understanding of natural resource issues. Combines study of key communication concepts with experiential projects, including critique of a public hearing and creation of media products. Through readings, case studies, and assignments, analyze approaches for effective public communication. Design brochures, websites, videos, etc., eventually collaborating in teams with real-life ‘clients’.
Prerequisite: CO 300 or CO 301B or CO 301C or JTC 300 or LB 300.
Registration Information: Junior standing. Must register for lecture and recitation. Sections may be offered: Online or Mixed Face-to-Face.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 401 Techniques in Public Relations Credits: 2 (0-4-0)
Course Description: Effective communications methods related to natural resource professions; preparation of graphics, organization of programs using slide show format.
Prerequisite: SPCM 200.
Terms Offered: Fall, Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

NR 420 Integrated Ecosystem Management Credits: 4 (3-3-0)
Course Description: Natural resource management exercises; quantitative integration techniques, group dynamics.
Prerequisite: (LAND 220 or LIFE 220 or LIFE 320) and (NR 220) and (NR 319 or NR 322) and (NR 320).
Restriction: Must be a: Senior, Senior - 5yr Bachelor, Senior - Post Bachelor, Senior - Second Bachelor.
Registration Information: Senior standing. Must register for lecture and laboratory.
Terms Offered: Fall, Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

NR 421 Natural Resources Sampling Credits: 3 (3-0-0)
Course Description: Designs, techniques, problems in sampling natural resource populations; analysis, interpretation of data.
Prerequisite: (STAT 201 or STAT 301) and (NR 220).
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 422 GIS Applications in Natural Resource Management Credits: 4 (2-4-0)
Course Description: Development and implementation of GIS projects and problems in spatial data analysis.
Prerequisite: NR 322 or NR 319.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 423 Applications of Global Positioning Systems Credit: 1 (.5-1-0)
Course Description: Introduction to concepts and use of global positioning systems with applications to natural resources.
Prerequisite: NR 322 or NR 505.
Registration Information: Must register for lecture and laboratory.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 425 Natural Resource Policy and Sustainability Credits: 3 (3-0-0)
Course Description: Principles, concepts, and operating examples of sustainable resource management with a concentration on forest policies and practices.
Prerequisite: NR 320.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 432 Foundations of National Forest Lands Program Credit: 1 (0-0-1)
Prerequisite: None.
Registration Information: Written consent of instructor. Offered as correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 433 Special Uses Management Credits: 4 (0-0-4)
Course Description: Authorities, application, and administration; agriculture, aviation, community, public information, industrial, water, treasure trove, and cultural uses.
Prerequisite: None.
Registration Information: Written consent of instructor required. Offered as correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 434 Linear Uses and FERC Licenses Credits: 3 (0-0-3)
Course Description: Rights-of-way authorities and management; road and trail grants and easements; communication uses; Federal Energy Regulatory Commission licenses.
Prerequisite: None.
Registration Information: Written consent of instructor. Offered as correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 435 Valuation and Landownership Adjustment Credits: 5 (0-0-5)
Course Description: Authorities, coordination, valuation, title; land purchase, donation, exchange, interchange, transfers, sales, condemnation, and negotiation.
Prerequisite: None.
Registration Information: Written consent of instructor. Offered as correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 436 Right-of-Way Acquisition Credits: 3 (0-0-3)
Course Description: Need, authority, policy, planning, acquiring, negotiating, and managing rights-of-way; cost-share agreements.
Prerequisite: None.
Registration Information: Written consent of instructor required. Offered as correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 437 Boundaries, Status, Claims, and Withdrawals Credits: 3 (0-0-3)
Course Description: Administration of landownership status, title encumbrances, withdrawals, title claims, Native American rights and claims, property boundary management.
Prerequisite: None.
Registration Information: Written consent of instructor. Offered as correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 440 Applications in Conservation Planning Credits: 3 (2-0-1)
Course Description: Conservation planning method applications that integrate natural resources by conservation organizations and government agencies.
Prerequisite: NRRT 340.
Registration Information: Required field trips. Sections may be offered: Online.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 460 Wilderness Management Credits: 3 (3-0-0)
Course Description: Management of wilderness in the U.S. National Wilderness Preservation System and equivalent international wildlands.
Prerequisite: (LAND 220 or LIFE 220) and (NRRT 231).
Registration Information: Required field trips.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 477 Restoration Case Studies Credits: 2 (0-2-1)
Course Description: Analysis and evaluation of ecological restoration projects.
Prerequisite: (LAND 220 or LIFE 220 or LIFE 320) and (F 311 or NR 326 or RS 300).
Registration Information: Written consent of instructor required. Must register for laboratory and recitation. Field trips occur one week prior to first day of semester. Required field trips.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

NR 484 Supervised College Teaching Credits: Var[1-5] (0-0-0)
Course Description: Prerequisite: None.
Registration Information: Written consent of instructor. A maximum of 10 combined credits for all 384 and 484 courses are counted towards graduation requirements.
Terms Offered: Fall, Spring, Summer.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.
NR 492 Seminar on Environmental Conservation Credits: Var[1-18] (0-0-0)
Course Description: Two-way communication skills used to involve publics, write for various media, and understand role of leadership within natural resources profession.
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

NR 493 Seminar on GIS and Remote Sensing Applications Credit: 1 (0-0-1)
Course Description: Techniques, use of remote sensing, GIS technologies for forest, range, wildlife, water, geology, recreation, and other resource management applications.
Prerequisite: NR 322 or NR 323.
Term Offered: Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

NR 495 Independent Study Credits: Var[1-18] (0-0-0)
Course Description: Two-way communication skills used to involve publics, write for various media, and understand role of leadership within natural resources profession.
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

NR 505 Concepts in GIS Credits: 4 (2-4-0)
Course Description: Concepts of geographic information systems and spatial data analysis.
Prerequisite: STAT 301 or STAT 511A.
Registration Information: Must register for lecture and laboratory.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 506 GIS Methods for Resource Management Credits: 4 (2-4-0)
Course Description: Current methods in applied geographic information systems and spatial data analysis.
Prerequisite: NR 505.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 510 Ecosystem Services: Theory and Practice Credits: 3 (3-0-0)
Course Description: Theory and application of ecosystem services drawing upon ecological, economic, and institutional analysis.
Prerequisite: AREC 540 or ECON 540 or AREC 541 or ECON 541 or ECOL 505 or FW 555.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 492 Seminar on Environmental Conservation Credits: Var[1-18] (0-0-0)
Course Description: Two-way communication skills used to involve publics, write for various media, and understand role of leadership within natural resources profession.
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

NR 493 Seminar on GIS and Remote Sensing Applications Credit: 1 (0-0-1)
Course Description: Techniques, use of remote sensing, GIS technologies for forest, range, wildlife, water, geology, recreation, and other resource management applications.
Prerequisite: NR 322 or NR 323.
Term Offered: Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

NR 495 Independent Study Credits: Var[1-18] (0-0-0)
Course Description: Two-way communication skills used to involve publics, write for various media, and understand role of leadership within natural resources profession.
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

NR 501 Leadership and Public Communications Credits: 3 (0-0-3)
Course Description: Two-way communication skills used to involve publics, write for various media, and understand role of leadership within natural resources profession.
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 503 Remote Sensing and Image Analysis Credits: 4 (3-3-0)
Also Offered As: GR 503.
Course Description: Interpretation and analysis of photographic, multispectral scanner, and radar data; sensor systems; applications to resource management.
Prerequisite: None.
Registration Information: Must register for lecture and laboratory. Credit allowed for only one of the following: GR 323, GR 503, NR 323, or NR 503.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 504 Computer Analysis of Remote Sensing Data Credits: 4 (2-6-0)
Course Description: Computer-aided analysis techniques for extracting resource information from aerial and satellite remote sensing data.
Prerequisite: NR 323 or NR 503.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 505 Concepts in GIS Credits: 4 (2-4-0)
Course Description: Concepts of geographic information systems and spatial data analysis.
Prerequisite: STAT 301 or STAT 511A.
Registration Information: Must register for lecture and laboratory.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 506 GIS Methods for Resource Management Credits: 4 (2-4-0)
Course Description: Current methods in applied geographic information systems and spatial data analysis.
Prerequisite: NR 505.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 510 Ecosystem Services: Theory and Practice Credits: 3 (3-0-0)
Course Description: Theory and application of ecosystem services drawing upon ecological, economic, and institutional analysis.
Prerequisite: AREC 540 or ECON 540 or AREC 541 or ECON 541 or ECOL 505 or FW 555.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 522 Wilderness Ecosystem Planning Credits: 3 (0-6-0)
Course Description: Expertise developed in preparing effective implementation plans for park and wilderness ecosystems.
Prerequisite: None.
Registration Information: Written consent of instructor.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 523 Quantitative Spatial Analysis Credits: 3 (3-0-0)
Also Offered As: STAT 523.
Course Description: Techniques in spatial analysis: point pattern analysis, spatial autocorrelation, trend surface and spectral analysis.
Prerequisite: ERHS 307 or STAT 301 or STAT 307.
Registration Information: Credit not allowed for both NR 523 and STAT 523.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 525 World Natural Resources Credits: 3 (3-0-0)
Course Description: Interdisciplinary approach to overview global problems and solutions in natural resources.
Prerequisite: None.
Registration Information: Written consent of instructor.
Term Offered: Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

NR 526 Techniques for Ecosystem Management Credits: 4 (4-0-0)
Course Description: Assessing the biophysical and sociopolitical environment and decision-making techniques used in ecosystem management.
Prerequisite: None.
Registration Information: Enrollment in Continuing Education in Ecosystem Management (CEEM) program. Offered as an online course only.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 527 Methods-Human Dimensions of Natural Resources Credits: 3 (2-0-1)
Course Description: Human dimensions research in areas of problem identification, research process, survey methods, sampling, validity and reliability.
Prerequisite: None.
Registration Information: Required: B.S. degree; participant in Advancing Human Dimensions Expertise Among Fish and Wildlife Agencies training program. Must register for lecture and recitation.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 528 Analysis: Human Dimensions-Natural Resources Credits: 3 (2-2-0)
Course Description: Human dimensions analysis techniques: codebook development and data entry, univariate statistics, and bivariate/multivariate statistics.
Prerequisite: STAT 301 or STAT 307 or ERHS 307 or STAT 311 or STAT 315.
Registration Information: Required: B.S. degree; participant in Advancing Human Dimensions Expertise Among Fish and Wildlife Agencies training program. Must register for lecture and laboratory.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 529 Concepts: Human Dimensions-Natural Resources Credits: 2 (2-0-0)
Course Description: Concepts guiding human dimensions research: motivations/satisfactions, attitudes, values, attitude/behavior change and norms.
Prerequisite: None.
Registration Information: Required: B.S. degree; participant in Advancing Human Dimensions Expertise Among Fish and Wildlife Agencies training program.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 530 Human Dimensions Application Credit: 1 (1-0-0)
Course Description: Application of human dimensions information; incorporate information into decision-making process.
Prerequisite: None.
Registration Information: Required: B.S. degree; participant in Advancing Human Dimensions Expertise Among Fish and Wildlife Agencies training program.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 531 Public Participation Credit: 1 (1-0-0)
Course Description: Diagnostic tools for public involvement; appropriate methods for specific situations, issues, and stakeholders.
Prerequisite: None.
Registration Information: Required: B.S. degree; participant in Advancing Human Dimensions Expertise Among Fish and Wildlife Agencies training program.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 535 Action for Sustainable Behavior Credits: 3 (0-0-3)
Course Description: Review sustainability issues and develop solutions considering environments; economics; psychology; sociology; law and politics; and administration.
Prerequisite: None.
Registration Information: Graduate or senior standing; 1 course in human dimensions; 1 course in science. Offered as a correspondence course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.
NR 540A Environmental Issues: Water Resources  Credits: 2 (1-2-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership Program; must have concurrent registration in NR 540A-D.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 540B Environmental Issues: Biological Diversity  Credits: 2 (1-2-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership Program; must have concurrent registration in NR 540A-D.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 540C Environmental Issues: Ecologic Reconciliation  Credits: 2 (1-2-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership Program; must have concurrent registration in NR 540A-D.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 540D Environmental Issues: Ecosystem Services  Credits: 2 (2-0-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership Program; must have concurrent registration in NR 540A-D.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 541 Conservation Policy, Finance, and Governance  Credits: 2 (2-0-0)  
Course Description: Overview of conservation policy, finance and governance issues at the local, national, and international levels.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 542 Global Change and Conservation  Credits: 2 (2-0-0)  
Course Description: Potential ecological, societal, and economic impacts of global change across scales in the context of conservation.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 543A Catalyzing Change: Conflict and Conservation  Credits: 2 (2-0-0)  
Course Description: Communication, conflict management, group decision-making theories and tools to effectively create change in the field of conservation.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 543B Catalyzing Change: Collaborative Conservation  Credits: Var[2-3] (0-0-0)  
Course Description: Collaborative communication theories, methods and tools to effectively create change in the field of conservation.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 544A Conservation Methods: Watershed Sciences  Credit: 1 (1-0-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 544B Conservation Methods: Ecological Sciences  Credit: 1 (1-0-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 544C Conservation Methods: Social Sciences  Credit: 1 (1-0-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 544D Conservation Methods: Spatial Information  Credit: 1 (1-0-0)  
Course Description:  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.
NR 544E  Conservation Methods: Integrative Field Work  Credits: Var[2-4] (0-0-0)
Course Description:
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 545A  Multilevel Views: Society and Conservation- Mexico  Credits: 2 (2-0-0)
Course Description: Myriad and often opposing views of societal and environmental problems across cultures and across scales.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 545B  Multilevel Views: Society and Conservation- Global  Credits: 3 (3-0-0)
Course Description: Myriad and often opposing views of societal and environmental problems across cultures and across scales.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 546A  Socioecological Context: Mexico  Credits: 2 (2-0-0)
Course Description: Background for field site-specific conservation: ecosystems, peoples, politics, and development.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program. Sections may be offered: Online.
Terms Offered: Fall, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 546B  Socioecological Context: Global  Credits: 3 (3-0-0)
Course Description: Background for field site-specific conservation: ecosystems, peoples, politics, and development.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program. Sections may be offered: Online.
Terms Offered: Fall, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 547  Poverty and Sustainable Development  Credits: 2 (2-0-0)
Course Description: Theoretical and methodological tools to analyze the interactions between poverty and sustainable development in the field site country.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 548A  Conservation Planning and Management: Mexico  Credits: 2 (2-0-0)
Course Description: Fundamental theories and management practices of protected areas in a global context.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Terms Offered: Fall, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 548B  Conservation Planning and Management: Global  Credits: 3 (3-0-0)
Course Description: Fundamental theories and management practices of protected areas in a global context.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program. Sections may be offered: Online.
Terms Offered: Fall, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 550  Sustainable Military Lands Management  Credits: 3 (3-0-0)
Course Description: Overview of military lands in the U.S.–historical, geographical, environmental–and evolution of military lands as part of the federal lands system.
Prerequisite: None.
Registration Information: Completed undergraduate degree. Offered as an online course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.
NR 551 Cultural Resource Management on Military Lands  
Credits: 3 (3-0-0)  
Course Description: Intro to cultural resource laws and policies for broad range of heritage resources, prehistoric and historic, with emphasis on tools and techniques.  
Prerequisite: NR 550.  
Registration Information: Graduate standing. Offered as an online only course.  
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 552 Ecology of Military Lands  
Credits: 3 (3-0-0)  
Course Description: Landscape ecology of military lands with emphasis on ecological processes and principles as related to militarily-induced disturbances.  
Prerequisite: NR 550.  
Registration Information: Graduate standing. Offered as an online only course.  
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 553 DoD Sustainable Building and Infrastructure  
Credits: 3 (3-0-0)  
Course Description: Major components of sustainability and sustainable design on U.S. military installations.  
Prerequisite: NR 550.  
Restriction: Must be a: Graduate.  
Registration Information: Bachelor’s degree. Offered as an online course only.  
Term Offered: Summer.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 554 Ecological and Social Agent-based Modeling  
Credits: 3 (2-2-0)  
Also Offered As: ANTH 554.  
Course Description: Exploring the use and making of agent-based models featuring interacting individuals in ecological and social simulation, with examples and projects.  
Prerequisite: None.  
Restriction:  
Registration Information: Junior or senior standing. Credit not allowed for both NR 554 and ANTH 554.  
Term Offered: Spring (odd years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 555 Preparation of Grant Proposals  
Credits: 2 (2-0-0)  
Course Description: Idea development, preparation, writing, and presentation of research proposals in natural resources.  
Prerequisite: (STAT 301) and (LAND 220 or LIFE 320 or NR 220 or LIFE 220).  
Term Offered: Spring.  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.  

NR 556 Ecosystem Services in a Changing World  
Credits: 3 (3-0-0)  
Course Description: Understanding of ecosystem services and global change.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 562 Research Methods in Conservation--Global  
Credits: 4 (4-0-0)  
Course Description: Reviews the contribution of fieldwork/research in addressing conservation issues, social and ecological data collection, and analysis methods.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership program. Sections may be offered: Online.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 563 DoD Sustainable Building and Infrastructure  
Credits: 3 (3-0-0)  
Course Description: Major components of sustainability and sustainable design on U.S. military installations.  
Prerequisite: NR 550.  
Restriction: Must be a: Graduate.  
Registration Information: Bachelor’s degree. Offered as an online course only.  
Term Offered: Summer.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 564 Ecological and Social Agent-based Modeling  
Credits: 3 (2-2-0)  
Also Offered As: ANTH 554.  
Course Description: Exploring the use and making of agent-based models featuring interacting individuals in ecological and social simulation, with examples and projects.  
Prerequisite: None.  
Restriction:  
Registration Information: Junior or senior standing. Credit not allowed for both NR 554 and ANTH 554.  
Term Offered: Spring (odd years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 565 Principles of Natural Resources Ecology  
Credits: 3 (3-0-0)  
Course Description: Overview of ecological fundamentals examined from the perspective of forest, rangeland, wildlife and fisheries science and management.  
Prerequisite: None.  
Registration Information: Admission to the Master of Natural Resources Stewardship or written consent of instructor. Offered as an online course only.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 566 Natural Resource Inventory and Data Analysis  
Credits: 3 (3-0-0)  
Course Description: Sampling designs, implementation and analysis for inventory and monitoring of forests, rangelands, wetlands and streams.  
Prerequisite: STAT 301 or STAT 311 or STAT 312.  
Registration Information: Admission to the Master of Natural Resources Stewardship or written consent of instructor. Offered as an online course only.  
Terms Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.  

NR 561 Habitat Evaluation Procedures  
Credits: 2 (2-0-0)  
Course Description: Rationale, philosophy, and use of habitat as a mechanism for conducting environmental impact assessments.  
Prerequisite: None.  
Registration Information: General biological, natural resources, or planning course work.  
Terms Offered: Fall, Spring, Summer.  
Grade Mode: Instructor Option.  
Special Course Fee: No.
NR 567 Analysis of Environmental Impact Credits: 3 (3-0-0)
Course Description: Preparation and evaluation of environmental impact statements under NEPA.
Prerequisite: None.
Registration Information: Admission to the Masters of Natural Resources Stewardship degree program. Written consent of instructor can substitute for degree program requirement. Credit not allowed for both NR 567 and NR 622. Sections may be offered: Online.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
NR 568 Economics of Forests, Restoration and Fire Credits: 3 (3-0-0)
Course Description: Overview of basic microeconomics principles as applied to forestry, restoration, and wildland fire management.
Prerequisite: None.
Registration Information: Admission to the Master of Natural Resources Stewardship or written consent of instructor. Offered as an online course only.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 569 Conservation Communication Fundamentals Credits: 2 (2-0-0)
Course Description: Communications and public relations theory as they relate to conservation issues and professionals. Successful conservation communication programs are outlined and discussed. Roles for communicators in conservation organizations are examined, including the relevance of outreach and education for conservation management. Audience analysis and diversity are emphasized for achieving goals in conservation communications planning.
Prerequisite: None.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. This is a partial semester course. Offered as an online course only.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 570 Conservation Managers – Media Communications Credits: 2 (2-0-0)
Course Description: Conservation communication roles, activities, and practices of the media are examined and analyzed. Critical relationships between the media and conservation practitioners and organizations are also examined. New directions and strategies in conservation communications are analyzed, including ways that conservation professionals can develop and take advantage of opportunities for collaboration with mass media outlets.
Prerequisite: None.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. This is a partial semester course. Offered as an online course only.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 571 New Media Communications for Conservation Credits: 2 (2-0-0)
Course Description: Fundamentals of new media, including digital and social media, and popular applications are introduced and evaluated with regard to their relevance for conservation communications. New and emerging digital media channels are discussed and evaluated relating to their use and relevance for conservation organizations and management outcomes. Conservation organizations and practitioners' use of social media for public information, education, and advocacy are also analyzed.
Prerequisite: None.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. This is a partial semester course. Offered as an online course only.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
NR 572 Strategic Communications for Conservation Credits: 2 (2-0-0)
Course Description: Examines relevant conservation communications principles, research, and best practices for the development of strategic communications plans for conservation management programs and organizations.
Prerequisite: NR 569, may be taken concurrently.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. This is a partial semester course. Offered as an online course only.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 573 Conservation Crisis Communications Credits: 2 (2-0-0)
Course Description: Examining and developing appropriate conservation communication strategies for conservation/environmental crisis response and recovery. Media, personal and other communications during near- and long-term planning scenarios are examined. Conservation management organizations' and practitioners' use of different messages and media platforms are also analyzed.
Prerequisite: None.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. This is a partial semester course. Offered as an online course only.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
NR 574 Advanced Communications for Conservation Credits: 2 (2-0-0)
Course Description: Advanced communications responsibilities and strategies within conservation planning. Project-based conservation planning processes and mandated public planning processes are both examined.
Prerequisite: NR 569, may be taken concurrently.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. This is a partial semester course. Offered as an online course only.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.
NR 577  Wetland Ecology and Restoration  Credits: 3 (3-0-0)
Course Description:  Wetland hydrology, ecology and soils; assessing conditions and identifying common disturbances; restoration techniques, planning and implementation.
Prerequisite:  NR 565 or NR 578 or NR 678 or RS 500 or RS 630.
Registration Information:  Offered as an online course only.
Term Offered:  Spring.
Grade Mode:  Traditional.
Special Course Fee:  No.

NR 578  Ecology of Disturbed Lands  Credits: 3 (3-0-0)
Course Description:  Analysis of basic and applied ecological principles involved in the restoration of drastically disturbed lands.
Prerequisite:  (LAND 220 or LIFE 220 or LIFE 320 or NR 565) and (SOCR 240).
Registration Information:  Sections may be offered: Online. Credit not allowed for both NR 578 and RS 578.
Term Offered:  Spring.
Grade Mode:  Traditional.
Special Course Fee:  No.

NR 586  Conservation Leadership Capstone  Credits: Var[1-6] (0-0-0)
Course Description:  Apply knowledge and skills to a project under the supervision of a conservation organization. These applied experiences facilitate learning, and help advance the goals of the conservation organization.
Prerequisite:  NR 549A and NR 549B.
Restriction:  Must be a: Graduate.
Registration Information:  Admission to the Master of Conservation Leadership program.
Terms Offered:  Fall, Spring, Summer.
Grade Mode:  Traditional.
Special Course Fee:  No.

NR 592  Seminar in Natural Resources  Credits: Var[1-18] (0-0-0)
Course Description:  Public relations aspects of current natural resource management programs; case history approach.
Prerequisite:  None.
Terms Offered:  Fall, Spring, Summer.
Grade Mode:  Instructor Option.
Special Course Fee:  No.

NR 600  Advanced Public Relations in Natural Resources  Credits: 2 (1-0-1)
Course Description:  Public relations aspects of current natural resource management programs; case history approach.
Prerequisite:  NR 400.
Restriction:  Must be a: Graduate, Professional.
Registration Information:  Must register for lecture and recitation.
Term Offered:  Spring.
Grade Mode:  Traditional.
Special Course Fee:  No.

NR 621  Design of Geographic Information Systems  Credits: 3 (1-4-0)
Course Description:  Algorithms, procedures, and applications of spatial data handling and spatial analysis.
Prerequisite:  (LAND 520 or NR 322) and (CS 110).
Restriction:  Must be a: Graduate, Professional.
Registration Information:  Must register for lecture and laboratory.
Term Offered:  Fall.
Grade Mode:  Traditional.
Special Course Fee:  No.

NR 625  Community-Based Natural Resource Management  Credits: 3 (0-0-3)
Course Description:  History, theory, practice, and evaluation of community-based natural resource management.
Prerequisite:  None.
Restriction:  Must be a: Graduate, Professional.
Registration Information:  One upper division course in natural resource ecology, management, or social science.
Term Offered:  Spring.
Grade Mode:  Traditional.
Special Course Fee:  No.

NR 675  Natural Resources Internship  Credits: Var[1-8] (0-0-0)
Course Description:  Field experience and exercises in international natural resources management.
Prerequisite:  None.
Restriction:  Must be a: Graduate, Professional.
Registration Information:  Written consent of instructor.
Terms Offered:  Fall, Spring, Summer.
Grade Mode:  Instructor Option.
Special Course Fee:  No.
NR 693  Natural Resources Stewardship Seminar  Credits: 2 (0-0-2)
Course Description: Invited speakers will present different perspectives on natural resources.
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Admission to the Master of Natural Resources Stewardship or written consent of instructor. Sections may be offered: Online.
Term Offered: Fall.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: No.

NR 793  Seminar on Remote Sensing and GIS  Credit: 1 (0-0-1)
Course Description: Techniques, use of remote sensing, GIS technologies for forest, range, wildlife, water, geology, recreation, and other resource management applications.
Prerequisite: NR 322 or NR 323 or NR 503 or NR 505.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.