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, Summer.
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.
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 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 Year Seminar  Credit: 1 (0-0-1)
Course Description: A first year seminar for all new Forest and Rangeland Stewardship students, both transfer and freshmen.
Prerequisite: None.
Registration Information: Must be enrolled in one of the following majors: Forestry, Natural Resources Management or Rangeland Ecology. This is a partial semester course. Required field trips.
Terms Offered: Fall, Spring.
Grade Mode: S/U Sat/Unsat Only.
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.
Prerequisites: (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 Pingree Park Campus. Must register for lecture and laboratory.
Term Offered: Summer.
Grade Mode: Instructor Option.
Special Course Fee: Yes.

NR 300  Biological Diversity  Credits: 3 (2-0-1)
Course Description: Biological diversity examined in context of species; extinction. Principles, techniques of conservation biology utilized to understand and resolve issues.
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 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.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

Registration Information: No
Additional Information: None.

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 (0-0-3)
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 BZ 100 to 481 - at least 1 course or LIFE 100 to 481 - at least 1 course.
Registration Information: Written consent of instructor can substitute for biology course. Offered as an online course only.
Term Offered: Fall, Spring, Summer.
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 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 381A1 Ecosystem Services and Human Well-Being Credits: 3 (3-0-0)
Course Description: Life-supporting and life-fulfilling services that natural and managed ecosystems provide to humans; theory, case studies, policy.
Prerequisite: ECON 202 or AREC 202 or LAND 220 or LIFE 220.
Term Offered: Spring.
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.
Prerequisites: (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.
Prerequisites: (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 Internship I Credit: 1 (0-0-1)
Course Description: Preparation for field experience in natural 
resources management.
Prerequisite: None.
Term Offered: Fall.
Grade Mode: Instructor Option.
Special Course Fee: No.
NR 400 Public Relations in Natural Resources Credits: 3 (2-0-1)
Course Description: Effective public relations and public information 
programs applicable to natural resource professions.
Prerequisite: NR 320.
Registration Information: Must register for lecture and recitation.
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)
Also Offered As: GR 420.
Course Description: Natural resource management exercises; 
quantitative integration techniques, group dynamics.
Prerequisites: (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: Yes.
NR 421 Natural Resources Sampling Credits: 3 (3-0-0)
Course Description: Designs, techniques, problems in sampling 
natural resource populations; analysis, interpretation of data.
Prerequisites: (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)
Course Description: History of U.S. public land law and evolution of 
National Forests. Nature, policy, trend, and needs of lands program; its 
integration into 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 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 444  Fire Economics and Policy  Credits: 3 (3-0-0)
Course Description: Development of wildlife and fuel management economics integrated with critical federal policies.
Prerequisite: ECON 202 or AREC 202.
Term Offered: Spring.
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.
Prerequisites: (LAND 220 or LIFE 220) and (NRRT 231).
Registration Information: Required field trips.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 479  Restoration Case Studies  Credits: 2 (0-2-1)
Course Description: Analysis of ecological restoration projects.
Prerequisites: (LAND 220 or LIFE 220 or LIFE 320) and (F 311 or NR 326 or RS 300).
Registration Information: Written consent of instructor required. 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]
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.
Term 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]
Course Description: 
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]
Course Description: 
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.
Prerequisites: (NR 100 to 481 - at least 1 course) and (CO 100 to 481 - at least 1 course or JTC 100 to 481 - at least 1 course or SPCM 100 to 481 - at least 1 course).
Registration Information: Offered as an online course only.
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: NR 503, NR 323, GR 323, GR 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 511.
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.
Prerequisites: 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 512  Spatial Statistical Modeling-Natural Resources  Credits: 3 (3-0-0)
Course Description: Statistical techniques used to model natural and environmental resources; GIS, remote sensing, and spatial statistics.
Prerequisites: STAT 301 and NR 322 and NR 323.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

NR 515  Natural Resources Policy and Biodiversity  Credits: 3 (0-0-3)
Course Description: Review evolution of natural resource policy, administration, and law emphasizing interdisciplinary concept of managing for biodiversity.
Prerequisites: POLS 100 to 481 - at least 1 course and NR 100 to 281 - at least 1 course.
Registration Information: Offered as an online course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 520  Applied Optimization in Resource Management  Credits: 3 (3-0-0)
Course Description: Design optimization models to integrate economics, ecology, and social concerns in natural resource management.
Prerequisites: (MATH 141 or MATH 155 or MATH 160 to 161 - at least 1 course or MATH 255 or MATH 261) and (ECON 100 to 481 - at least 1 course).
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

NR 521  Natural Resource Administration  Credits: 2 (2-0-0)
Course Description: Administration of forest and natural resource projects in developed and developing countries.
Prerequisite: NR 320.
Term Offered: Fall (odd years).
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: Summer.
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: None.
Registration Information: Admission to the Conservation Leadership Program; 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: None.
Registration Information: Admission to the Conservation Leadership Program; 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: None.
Registration Information: Admission to the Conservation Leadership Program; 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: None.
Registration Information: Admission to the Conservation Leadership Program; 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]
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: 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: 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: 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: 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]
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 549A  Conservation and Systems Leadership Credits: Var[1-3]
Course Description: Conservation leadership development by exposure to leadership models, theories, case studies, assessments and trainings.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Terms Offered: Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.

NR 549B  Conservation and Systems Leadership: Field Credits: Var[1-3]
Course Description: Effective environmental leadership across cultures through exposure to leadership models, theories, case studies, assessments and trainings.
Prerequisite: None.
Registration Information: Admission to the Conservation Leadership program.
Term Offered: 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. Sections may be offered: Online.
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. Sections may be offered: Online.  
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. Sections may be offered: Online.  
Terms Offered: Fall, Spring, 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: Must not be a: Freshman, Freshman, Sophomore, Sophomore.  
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.  
Prerequisites: (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 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 562  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 563  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 564  Systems Thinking and Biodiversity  Credits: 3 (3-0-0)  
Course Description: Social-ecological systems and the implication of social-ecological systems thinking for biological diversity conservation efforts.  
Prerequisite: None.  
Registration Information: Admission to the Conservation Leadership master's degree program.  
Term Offered: Fall.  
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: Written consent of instructor can substitute for degree program requirement. Admission to the Masters of Natural Resources Stewardship degree program. Offered as an online course only.  
Term Offered: Fall, Spring.  
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: None.  
Registration Information: Written consent of instructor can substitute for degree program requirement. Admission to the Masters of Natural Resources Stewardship degree program. Offered as an online course only.  
Term Offered: Spring.  
Grade Mode: Traditional.  
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 Masters of Natural Resources Stewardship degree program. Written consent of instructor can substitute for degree program requirement. 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.  
Prerequisites: (LAND 220 or LIFE 220) and (SOCR 240).  
Registration Information: Credit not allowed for both NR 578 and RS 578.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 580A3 Ecosystems 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: None.  
Registration Information: One course in microeconomics; one course in ecology, conservation biology, or natural resource management or written consent of instructor.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 580A5 Sustainability Issues in the Dept of Defense Credits: 3 (0-0-3)  
Course Description: Focus on the major components of sustainability and sustainable design within cantonment areas on U.S. military installations.  
Prerequisite: NR 550.  
Registration Information: Sections may be offered: Online.  
Term Offered: Summer.  
Grade Mode: Instructor Option.  
Special Course Fee: No.  
NR 592 Seminar in Natural Resources Credits: Var[1-18]  
Course Description:  
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.  
Prerequisites: (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 676 Ecological Models Credits: 4 (3-2-0)  
Course Description: Model development for ecosystems, subsystems; deterministic, stochastic models; validation, sensitivity analysis.  
Prerequisite: NR 575.  
Restriction: Must be a: Graduate, Professional.  
Registration Information: Must register for lecture and laboratory.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  
NR 678 Advanced Ecological Restoration Credits: 4 (3-0-1)  
Course Description: Analysis of environmental factors influencing restoration of disturbed lands and practices for successful restoration of disturbed ecosystems.  
Prerequisites: (BZ 450 or F 311 or LAND 220 or LIFE 220) and (SOCR 240).  
Restriction: Must be a: Graduate, Professional.  
Registration Information: Admission to the Master of Natural Resource Stewardship program can substitute for coursework. Credit not allowed for both NR 678 and RS 478. Sections may be offered: Online.  
Terms Offered: Fall, Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.
NR 684  Supervised College Teaching  Credits: Var[1-5]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Registration Information: Written consent of instructor.
Terms Offered: Fall, Spring, Summer.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

NR 687  Natural Resources Internship  Credits: Var[1-8]
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: Var[1-2]
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 degree program. 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.