

# Natural Resources Planning & Interpretation

## LOWER DIVISION

**NRPI 105. Natural Resource Conservation** (3) FS. Broad aspects; history of humanity in relation to land use; human populations in relation to resources; history of conservation movement; present day conservation problems. [GE.]

**NRPI 210. Public Land Use Policies & Management** (3). Overview of public lands: Historical view of major statutes, agency evolution, and resource management policies. [Recommended preparation: NRPI 105.]

**NRPI 215. Natural Resources & Recreation** (3). Three primary components: resources, visitors, and management. Motivations and benefits, overview of providers, and fundamental recreation concepts.

**NRPI 253. Interpretive Computer Graphics** (3). Fundamental course in computer graphic design and layout for producing natural resource interpretive displays, flyers, posters, book covers, brochures, newsletters, and multimedia slide presentations. Background in basic computer skills required. [Weekly: two 3-hr labs.]

**NRPI 270. Global Positioning System Techniques** (1). Concepts and use of Global Positioning System (GPS) technologies for way finding and field data collection. Brief examination of interface with GIS. Five week module. [Prereq: math code of 30 or MATH 40. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 277. Introduction to Remote Sensing** (3). Aerial photography, multispectral and thermal scanning, satellite sensors, digital image processing. Application to inventory of natural resources and planning. Emphasis: image interpretation for terrain and vegetation analysis. [Weekly: 2 hrs lect, 3 hrs lab.]

## UPPER DIVISION

**NRPI 309 / ENVS 309. Environmental Conflict Resolution** (3) FS. Introduction to conflict theory as applied in complex natural resource disputes. Skill development in planning culturally appropriate and inclusive public participation processes, meeting facilitation, and conflict mediation. Comparison of options for nonviolent conflict management. [CWT. Weekly: 1 hrs lect, 4 hrs activ.]

**NRPI 309B. Environmental Communication** (3). This course is intended for advanced students who want to learn the basic theories, strategies and techniques used to communicate a body of scientific knowledge to the public in a comprehensible manner. [CWT.]

**NRPI 310. Introduction to Natural Resource Planning** (3). History of resource and land-use planning, planning theory, planning processes, and land development in the US. Overview of current resource and land-use planning processes

and techniques at local, regional, state, and federal levels. [Prereq: NRPI 105 and NRPI 210 or equivalent.]

**NRPI 325. Environmental Law & Regulation** (3). Overview of laws, policy, and institutions used to regulate natural resource management and protect the environment. Legal principles; property rights; federal, state, and international environmental legislation; and regulatory authorities. [Prereq: NRPI 210. Weekly: 3 hrs lect.]

**NRPI 340. Human Dimensions of Resource Management** (3). Three primary dimensions of human resource management: historical review of recreation theory; social science aspects of researching recreation visitors; staff management. Topics: recreation motivations, recreation clients, management strategies, in-house staff relations. Prereq: NRPI 215 or IA.]

**NRPI 350. Introduction to Natural Resource Interpretation** (3). Theories, goals, techniques for interpreting natural resource and heritage areas. Planning/presenting interpretive programs. Case studies, projects. [Coreq: NRPI 351. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 351. Natural Resources Interpretation Field Trip** (1). Visit sites illustrating issues and techniques of natural resources interpretation. [CR/NC. Coreq: NRPI 350. Three-day field trip.]

**NRPI 353. Interpretive Graphics** (3). Theory and skills of written and graphic interpretation techniques. Application to signs, brochures, self-guided trails, exhibits. [Prereq: NRPI 253, 350. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 360. Natural Resource Planning Methods** (3). Interdisciplinary methods. Use case studies to explore acquisition, analysis, and application of ecological, economic, and social information for planning at site, landscape, and regional scales. [Prereq: NRPI 310. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 376. GIS for the Social Sciences** (4). Application of Geographic Information Systems in social sciences as a tool to collect and analyze qualitative and quantitative data for sociospatial research, and policy development. [Weekly: 3 hrs lect, 3 hrs lab.]

**NRPI 377. Introduction to GIS Concepts** (3). Geographic Information Systems (GIS) mapping concepts including map projections, coordinate systems and datums. Location and incorporation of a variety of data types. View and query spatial data; create layouts and maps. [Prereq: familiarity with Windows environment. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 400 / ENVS 400. Inscape & Landscape** (3) FS. An evaluation of individual perception (inscape) of nature (landscape) relative to our unique individual histories. An overview of human population growth, resource consumption, and

resource availability will lead to a personal evaluation of the relationship of inscape to landscape. [GE. Weekly: 2 hrs lect, 2 hrs activ.]

**NRPI 412 / ENVS 412 / PSCI 412. Legal Research** (4). Principles and research procedures in California/federal case law, statutory law, and codes. Computerized legal research; legal citation and writing.

**NRPI 415. Recreation Planning Workshop** (3). The planning process as applied to natural resource recreation areas; master planning for parks and other wildland recreation areas; NEPA; public involvement; planning facilities such as trails and campgrounds. [Prereq: NRPI 215. Weekly: 1 hr lect, two 3-hr labs.]

**NRPI 420. Ecosystem Analysis** (3). Measure and characterize physical and biological parameters of land ecosystems. Structure; carrying capacity; stability; vegetation and animal populations. [Prereq: BIOL 330, BOT 350, SOIL 260 (or equivalent); microcomputing skills; or IA. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 425. Environmental Impact Assessment** (3). Legislative/judicial history and current implementation of National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). Practice analyzing and preparing impact assessments for development projects. Recommended preparation: NRPI 325. [Weekly: 2 hrs lect, one 3-hr lab.]

**NRPI 428. One Earth: Common Ground in Resource Management** (3). Belief systems' influence on current scientific models impacting economic, environmental, and cultural health and productivity. Emerging whole-system paradigms leading to common ground, vision, and consensus in resource management. [CR/NC. Prereq: senior standing; completed lower division GE science; or IA.]

**NRPI 430. Natural Resource Management in Protected Areas** (3). Principles/practices managing natural resources in wildland recreation areas. Fire, air, water quality; erosion; endangered species; exotic species control; hazardous features. Case studies. [Prereq: ecology course, NRPI 215, or IA. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 435. Grant Proposal Writing** (2). Fundamentals of grant proposal writing, from conception of the idea to writing a coherent and persuasive proposal. Combines critical thinking, communication and quantitative reasoning skills, and critical evaluation of proposals. [Weekly: 2 one-hr lect.]

**NRPI 440. Managing Recreation Visitors** (2). Theoretical foundations and practical applications of managing recreation settings and people who visit them. [Prereq: NRPI 215, NRPI 340.]

**NRPI 440L. Managing Recreation Visitors Field Trip** (1). Field trips to state and national parks and forests. [Prereq: NRPI 215, NRPI 340. CR/NC.]

**NRPI 450. Advanced Natural Resource Interpretation** (3). Controversial issues in interpretation, children's interpretation, and management of interpretation. Advanced oral and written interpretation techniques. [Prereq: NRPI 253, 350, and 353, or IA. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 453. Interpretation Practicum - Graphic** (4). Capstone course for interpretation majors with a focus on graphic skills in interpretive programming and design. Projects include exhibits, brochures, and overall interpretive programming. [Prereq: NRPI 350, 353, and 450, or their equivalents.]

**NRPI 454. Interpretation Practicum - Oral** (2). This is a capstone course for interpretation majors with a focus on oral interpretation. Students meet with local agencies, schools and organizations with a need for an interpretive education program. Students will design, produce and deliver educational opportunities for the clients. [Prereq: NRPI 450. Weekly: Two three-hour labs.]

**NRPI 460. Natural Resource Agency Planning** (3). Planning processes applied by natural resource agencies for beneficial biological, ecological, economic, and social outcomes of human interactions with the environment. Key themes: stewardship, involvement of stakeholders. [Prereq: NRPI 360 and 425 (C), or equivalent or IA. Weekly: 2 hrs lect, 3 hrs lab; 3-day field trip required. Service fee.]

**NRPI 465. Rural Community Planning** (3). Integrating community and economic development with land-use planning tools, such as agricultural land/open space preservation and growth management programs in small towns and rural areas dependent on natural resources. [Prereq: NRPI 360. Weekly: 2 hrs lect, 3 hrs lab. Service fee.]

**NRPI 470. Intermediate GIS** (3). Digital mapping and analysis. How GIS data are collected, structured, entered, edited. Analysis procedures/theory. Lab exercises; project. ArcGIS and ArcView GIS environments. [Prereq: NRPI 377; BIOM 109 or STAT 108 recommended. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 471. Spatial Analysis Lab Projects** (1). Intended for students with experience in GIS and/or Remote Sensing who require the facilities and software tools available in the Spatial Analysis Lab for special projects or research. This course does not count towards graduation units. [IA. AU.]

**NRPI 475. Senior Planning Practicum** (4). Capstone course: a planning project in a group format. [Prereq: NRPI 460 (C) or 465 (C), graduating senior. Weekly: 6 hrs lab/practicum.]

**NRPI 480. Selected Topics** (.5-3). Planning, ecology, administration, law, ethics, or other topics of current interest. [Rep with different topics. Prereq: IA. Variable format.]

**NRPI 480L. Selected Topics/Lab** (.5-3). Planning, ecology, administration, law, ethics, or other topics of current interest. Lab/field format. Service Fee. [Rep with different topics. May require prereqs.]

**NRPI 482. Internship** (2-3) **FS**. Students implement the theory and practice of their major by

working for a public agency or private firm/organization. Advanced standing and instructor consent.

**NRPI 485. Senior Seminar** (1). Topics of current interest. [Prereq: junior/senior standing or IA. Rep.]

**NRPI 499. Directed Study** (1-3). Individualized research/study project. [Prereq: junior/senior standing. Rep.]

## GRADUATE

**NRPI 540. Raster GIS Modeling Techniques Seminar** (3). Raster analysis techniques in GIS using the ArcGIS environment. Map algebra, interpolation techniques and model integration. Sources and ramification of potential error: Incorporate use of scripting to enhance analytical efficiency. [Prereq: NRPI 470; BIOM 109; advanced statistics and NRPI 277 recommended. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 550. Advanced Natural Resource Interpretation** (3). Interpretive facility planning, children's interpretation, and management of interpretation. Advanced oral/written interpretation techniques. [Prereq: NRPI 253, 350, and 353, or IA. Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 570. Vector GIS Modeling Techniques Seminar** (3). Vector analysis concepts using the ArcGIS environment including vector regions, dynamic segmentation, networks, and modeling techniques. Incorporate use of scripting to enhance analytical efficiency in the analysis of GIS data. [Prereq: NRPI 470 and BIOM 109 or equivalent. Statistics highly recommended Weekly: 2 hrs lect, 3 hrs lab.]

**NRPI 580. Selected Topics** (1-3). Interpretation, planning, ecology, administration, law, ethics, other topics of interest. [Rep with different topics.]

**NRPI 597. Mentoring & Teaching-Associate Training** (1-4). Train in course preparation and delivery. Advance majors and grad students take this prior to or concurrent with teaching-assistant or teaching-associate assignments. No credit toward graduate degree.

**NRPI 685. Graduate Seminar** (1-3). Topics of current interest. [Rep.]

**NRPI 690. Thesis** (1-4). [Rep.]

**NRPI 692. Professional Paper** (1-4). [Rep.]

**NRPI 695. Field Research** (1-4). [Rep.]

**NRPI 699. Directed Study** (1-4). [Rep.]