

Water Related Classes Offered at UNM – Spring 2016

This is a list of classes that we know about that may be of interest to students in the Water Resources Program and other programs who are studying topics related to the management, policy, science and engineering of water resources. Send additions or corrections to Annamarie Cordova (acordova@unm.edu) with a copy to Bob Berrens (rberrens@unm.edu).

Course No.	Title	Description	Instructor	Time
Biology				
Biol 495	Limnology	Chemistry, physics and biology of freshwater ecosystems	Bixby	MWF 1100-1150
Biol 496L	Limnology Lab	Optional lab with limnology class	Bixby	F 1400-1650
Biol 508L	Bosque Internship	Students learn about and participate in monitoring the health of the bosque - groundwater depths, precipitation and leaf biomass. Also water chemistry, fuel load and surface-active arthropods. We talk quite a bit about water issues in Albuquerque and New Mexico in general	Eichhorst	T 1600-1800
Civil Engr.				
CE 335** (Counts as grad credit)	Intro. to Environmental and Water Resources Engineering	Basic principles of environmental and water resources engineering: material and energy balances, hydrology, water treatment and distribution, wastewater collection and treatment.	Schuler	MWF 0900-0950
CE 531	Physical-Chemical Water Treatment Processes	Theory and design of common physical-chemical treatment processes: coagulation, flocculation, sedimentation, granular and membrane filtration, reverse osmosis, adsorption, advanced oxidation, and disinfection.	Howe	TR 16:00 – 17:15
CE 542	Intermediate Hydrology	Hydrometeorology, interception, depression storage, infiltration, hydrograph analysis, flood	Gonzalez-Pinzon	TR 1230-1345

		routing, urban hydrology, groundwater analysis and utilization.		
CE 547	GIS in Water Resources Engineering	Principles & operation of GIS using ArcGIS, work with surface & subsurface digital representation of the environment considering hydrologic & transport processes	Coonrod	MW 1000-1150
CE 598	Stream and Watershed Restoration	Introduction to the principles and practices of stream and watershed restoration including hydrologic, geomorphic, and ecological perspectives.	Stone, M	TBD
Community & Regional Planning				
CRP 527	Watershed Management Planning	Watershed conservation worldwide, with case studies from Latin America, Asia, North Africa, North America. Land use impacts on water quantity and quality. Each student chooses a watershed of their choice to write a watershed management plan & present it	Fleming	R 1300-1530
CRP 532	Foundations of Natural Resources Planning	Survey of methods and concepts of environmental planning, with an emphasis on hydrology and land use.	Fleming	T 1400-1630
CRP 535	Community Economics For Planners	Explores the intersections of economics and contemporary economic development issues and policies. How do economic decisions and policies impact the shaping of space and development of communities? Covers strategies to strengthen local economies. Note: will be accepted as approved course in WRP Group II Economics Category.	Issac	W 1600-1830
CRP 585-01	Negotiation and Public Dispute Resolution	Students learn about principled negotiation and its alternatives, as well as practice and build facilitation and meeting management skills. The participants also learn how to manage	Richardson (CRP) & Karpov	T 1730-2000

		complex multi-party, multi-issue community development, land use and environmental disputes. Note: will be accepted as approved course in WRP Group II Soc. Communication and Culture Category (SCC)		
Earth & Planetary Sci.				
EPS 476-576 (AOA) WR 576	Physical Hydrology	Quantitative treatment of the hydrologic cycle - precipitation, evapotranspiration, infiltration, runoff and subsurface flow, global change and hydrology, catchment and hillslope hydrology, hydrologic system - ecosystem interactions, hydrology and water resources management. Prerequisites: Upper-division standing. Math 163L and Physics 160, or permission of instructor.	Weissmann	MWF 10-1030
EPS 516	Fluvial Geomorphology	A quantitative overview of the physical and biological processes that shape stream systems, with particular relevance to understanding natural and anthropogenic channel and floodplain changes, evolution of fluvial landscapes, and stream restoration and renaturalization.	Meyer	T 1400-1630
Economics				
Econ 442-001	Topics: Envi. & Natl. Res. Econ. (will include water resources modeling component)	Focus on public policy and regulation. Specialized issues such as development and management of water, mineral, energy, air quality, forest and fishery resources, resource scarcity, sustainability, non-stationary pollution, water quality and global resource distribution.	Staff	TR 1530-1645
Econ 542-001	Envir Resource & Eco Econ	Special topics in environmental and natural resource economics.	Thacher	M 1600-1845
Econ 544-001	Environmental	Causes and consequences of environmental	Berrens	TR 1400-1515

	Economics	externalities. Design and implementation of alternative policy instruments. Theory and methods to measure economic value of market and non-market environmental services.		
Econ 545 (AOA WR 572)	Water Resources II- Models	Introduction to quantitative modeling & models used by water resource professionals; hydrological, economic, ecological, etc.	Wang, J.; J. Roach&J. Fleck	TR 1700-1845
Environmental Science				
ENVS 430/530	Adv. Env. Sci.	Application of basic science to the interdisciplinary study of environmental systems. Causes of and solutions to land, air, water and ecosystem degradation	Crossey	TR 930-1045 W 1400-1650
Geography				
Geog 586L	Applic. of GIS	Selected applications of Geographic Information Systems, including anthropology, business, crime, ecology, engineering, health, planning, water resources and others. Covers analytical techniques specific to selected applications.	Xiao	M 1700-1930
Law				
Law 547	Water Law	Water law. All non-law students must get permission from professor.	Benson	MW 1430-1545
Law 593-010	Intr. to Natl. Resources Law	Topics	Gauna	ARR
Public Admin.				
PADM 522	Program Evaluation	This course is intended to provide an advanced introduction to the theory and practice of program evaluation, along with policy analysis and evaluation.	Peng	T 1900-2130
PADM 544 001 and 020	Public Budgeting	Basic management of public funds, preparation and processing of budgets, revenue projection and expenditure controls. Issues of public policy	A Leon-Moreta	001 R 1600-1830 020: S 0900-1130

		and establishment of priorities through budgeting. Note: will be accepted as approved course in WRP Group II Economics Category		
Public Health				
PH 521	Intro. to Epidemiology	Designed for students pursuing Public Health certificate. Provides students with basic epidemiologic background and methods to analyze and interpret disease occurrence in populations. Emphasizes community assessment, surveillance, problem solving, health promotion, and disease prevention.	Tollestrup	ARR
PH 506	Env. & Occup. Health	Students will learn to apply the ecologic principles of agent, host and environment to diseases associated with exposures to the physical environment and chemical contaminants.	Athas & Frost	TR 1700-1815
Water Resources				
WR 572 (AOA Econ 545)	Water Resources II- Models	Introduction to quantitative modeling & models used by water resource professionals; hydrological, economic, ecological, etc.	Wang, J.; J. Roach and J. Fleck	TR 1700-1845
WR 576 (AOA E&PS 576)	Physical Hydrology	Quantitative treatment of the hydrologic cycle - precipitation, evapotranspiration, infiltration, runoff and subsurface flow, global change and hydrology, catchment and hillslope hydrology, hydrologic system - ecosystem interactions, hydrology and water resources management.	Weismann	MWF 1000-1050