



## **Env Resource Mgmt & Pollution Prevention Program**

### ***Course Descriptions***

**DeAnza Environmental Studies Dept, 2018-19**



#### **ES 50 Introduction to Environmental Resource Management and Pollution Prevention (3 units)**

An introduction to the interrelated fields of Environmental Resource Management (ERM) and Pollution Prevention (P2), surveying the areas of environmental law and regulation, environmental health, pollution control and prevention, and efficient/sustainable use of our environmental resources (air, water, land, etc.). Includes overviews of: 1) U.S. and California environmental laws and the governmental regulatory agencies that implement those laws 2) Environmentally-related human health issues and the associated field of Environmental Health, 3) Pollution control technologies, 4) Pollution prevention approaches and techniques (such as Design for the Environment, Product Stewardship, Green Building, Energy Management, Water Conservation, etc.) and 4) Environmental management tools, including Environmental Management Systems (such as ISO 14001) and Environmental Performance Reports.

#### **ES 6 Introduction to Environmental Law (4 units)**

An introduction to environmental law and associated regulation in the U.S. and California, addressing the areas of air quality, water quality, waste management, hazardous materials management, natural resources management and preservation, global warming/climate change, and land use, along with environmental equity/justice concerns.

#### **ES 56 Introduction to Environmental Health (4 units)**

An introduction to the field of environmental health, a branch of public health that deals with the effects that environmental hazards – such as air and water pollution, industrial and hazardous wastes, noise and radiation, food and waterborne diseases, vectors (disease-carrying organisms), and pesticides and other toxic chemical-containing products, including consumer products – have on human health. Investigates the laws, regulations, standards and policies governing environmental and occupational exposures, and the means (principles and practices) used to reduce human health risks from such exposures. Explores associated job and career opportunities in the field.

#### **ES 58 Introduction to Green Building (1 unit)**

An overview of the strategies used to implement a green building project. Strategies include green building policies, best practices and guidelines including LEED (Leadership in Energy and Environmental Design), passive solar design, use of sustainable materials and energy efficiency in buildings, as well as an assessment of the impact of construction and buildings on society, economics, and the environment.

#### **ES 61A Env Resource Mgmt & Pollution Prevention: Air, Water & Land (4 units)**

Explores environmental protection (pollution control and prevention) and resource management, focusing on our air, water and land resources. Examines the scientific, legal, technical and practical management aspects involved in protecting and sustainably using/managing such resources. Explores associated job and career opportunities in these areas.

#### **ES 61B Env Resource Mgmt & Pollution Prevention: Chemicals, Energy & Waste (4 units)**

Explores environmental protection (pollution control and prevention) and resource management, focusing on: 1) energy and chemical production and use and 2) prevention and management of solid and hazardous waste. Examines the scientific, legal, technical and practical management aspects involved in: 1) producing and using energy and chemicals/chemical products, 2) recovering resources from waste materials and 3) disposing of non-recoverable waste materials. Explores associated job and career opportunities in these areas.

#### **ES 61L Env Resource Mgmt & Pollution Prevention: Sampling, Monitoring & Assessment Lab (1 unit)**

Laboratory class focused on using environmental sampling, monitoring and assessment devices and equipment and analytical tools to detect and quantify environmental contaminants present in air, water and soil, as well as assess the overall quality of those basic environmental resources.

#### **ES 62A Env Mgmt Tools: Environmental Management Systems & Env Performance Reporting (4 units)**

Examines: 1) Environmental Management Systems (systematic approaches, such as ISO 14001 and EMAS, used to achieve both regulatory compliance and “beyond compliance” environmental improvement within businesses and other organizations), and 2) Environmental Performance Reporting (involving publicly available reports issued by businesses and other organizations showing their environmental performance based on established metrics). Also includes an examination of Green Business Certification programs. Explores associated job and career opportunities in these areas.

**ES 62B Env Mgmt Tools: CEQA & Environmental Impact Reports (EIRs) (4 units)**

Examines the "CEQA process" with particular emphasis on Environmental Impact Reports (EIRs) which are used as a means to identify, assess, mitigate (as feasible) and then publicly disclose the significant environmental effects of certain proposed projects (both public and private) as required under the California Environmental Quality Act (CEQA). Case studies involving local projects are presented along with examination of corresponding CEQA documents, including EIRs. Explores job and career opportunities associated with CEQA/Environmental Impact Assessment and Reporting.

**ES 62C Env Mgmt Tools: Environmental Site Assessments (4 units)**

Examines Environmental Site Assessments (ESAs) which are used to assess (prior to their sale or redevelopment/ reuse) commercial, light industrial, and "brownfield" sites for significant environmental contamination and, if found, then develop and evaluate alternatives to "remediate" (clean up or contain) the contamination found to acceptable levels. Focus is on the required components of a standard Phase I ESA and associated report generation. Explores associated job and career opportunities.

**ES 62D Env Mgmt Tools: Industrial Ecology and Sustainable Design Principles (4 units)**

Examines Industrial Ecology (applying the lessons of nature to industrial processes, products and systems) and associated sustainable design concepts, principles and tools (such as Life Cycle Impact Assessments, Design for the Environment, Biomimicry, Green Chemistry/Green Chemicals, Green Building, Energy Efficiency & Conservation, Water Efficiency & Conservation, Zero Waste). Also includes an examination of Product Stewardship (Extended Producer Responsibility) policies to enhance reuse/recycling efforts and prevent pollution. Explores associated job and career opportunities.

**ES 63 Agenda 21: Blueprint for Sustainability (1 unit)**

An overview of Agenda 21, an action plan to implement the principles and agreements of the United Nations' Rio de Janeiro Earth Summit held back in 1992. Examines the seven central themes of Agenda 21 to ensure that all people benefit by the implementation of it regardless of race, ethnicity or socioeconomic status.

**ES 64 California's Approach To Global Warming/Global Climate Change (2 units)**

Examines the various strategies and approaches being taken at the state and local levels to address both the root causes and the anticipated effects of global warming/global climate change. Particular emphasis is placed on examining implementation of state law AB 32, California's Global Warming Solutions Act. Explores associated job and career opportunities in helping to address global warming/global climate change.