



# Certificates in Env Resource Mgmt & Pollution Prevention

## *Description & Course Requirements*

DeAnza Environmental Studies Dept, 2023-24



***ERM&P2 Certificates Are Now Offered Fully Online***



**Description:** In this **career-oriented** program, students are trained in the interrelated fields of:

- **Environmental Resource Management:** Sustainable use, management and protection of our fundamental environmental resources – air, water, land, food, climate, & earth-extracted materials.
- **Pollution Control, Prevention & Cleanup:** Addressing air, water, & land pollution, hazardous waste & hazardous materials, trash & garbage, and climate change.

The training received is **multidisciplinary**, covering the areas of law/regulation, public health, economics, and science and technology, and includes coursework covering a variety of practical management tools that employers look for. Upon completion, students are prepared for **employment** as environmental management/pollution prevention specialists in a wide range of positions and settings, including working for business/industry, government, and non-profit organizations.

### **Certificate of Achievement (COA) Course Requirements:**

**Units**

**When Offered\***

|       |  |   |    |
|-------|--|---|----|
| ES 50 | Intro to Env Resource Mgmt & Pollution Prevention                  | 4 | F  |
| ES 61 | Environmental Resource Mgmt & Pollution Prevention:                |   |    |
|       | A: Air, Water & Land   | 4 | W  |
|       | B: Energy, Chemicals & Waste                                       | 4 | Sp |
| ES 62 | Environmental Mgmt Tools: ( <b>complete two (2) of 4 offered</b> ) | 8 |    |
|       | A: Env Mgmt Systems & Env Performance Reporting                    |   | W  |
|       | B: CEQA & Environmental Impact Reports (EIRs)                      |   | W  |
|       | C: Environmental Site Assessments (ESAs)                           |   | Sp |
|       | D: Industrial Ecology & Sustainable Design Principles              |   | Sp |

### **Total – COA Coursework**

**20**

### **Certificate of Achievement-Advanced (COAA) Course Requirements:**

**Units**

**When Offered\***

|                             |   |    |           |
|-----------------------------|---|----|-----------|
| All COA Courses Noted Above |   | 20 | see above |
| <b><u>PLUS</u></b>          |   |    |           |
| ES 64                       | Climate Change Mitigation & Adaptation in California                  | 4  | FW        |
| ES 62                       | Environmental Mgmt Tools: ( <b>complete the 2 not taken for COA</b> ) | 8  |           |
|                             | A: Env Mgmt Systems (EMS) & Env Performance Reporting                 |    | W         |
|                             | B: CEQA & Environmental Impact Reports (EIRs)                         |    | W         |
|                             | C: Environmental Site Assessments (ESAs)                              |    | Sp        |
|                             | D: Industrial Ecology & Sustainable Design Principles                 |    | Sp        |

### **Total – COAA Coursework**

**32**

\* **Note:** Based on prior year's course schedule, subject to change – check the actual course schedule when released; all courses to be offered at least once per year. F: Fall; W: Winter; Sp: Spring; Su: Summer

**See Reverse Side For Certificate Course Descriptions**

## **ERM&P2 Certificate Course Descriptions (2023-24)**

### **ES 50 Introduction to Environmental Resource Management and Pollution Prevention (4 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, environmental impact assessment, sustainable/"green" design, climate protection, and efficient/sustainable use of our fundamental environmental resources (air, water, land, food, climate, and extracted materials including timber, energy resources, and minerals/mined materials). Explores associated job & career opportunities in the ERM & P2 fields.

### **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 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 64 Climate Change Mitigation & Adaptation in California (4 units)**

Examines the various strategies and approaches being taken at the state and local/regional levels to address both the root causes and the anticipated effects of global warming/climate change here in California. Explores associated job and career opportunities in monitoring, mitigation, and adaptation to climate change.