

WATER SCIENCE MINOR

Offered at: San Luis Obispo Campus

The minor emphasizes one of three areas of study: irrigation, water policy, or watershed management. In California, approximately 40% of available water is used for agriculture including crop irrigation, 50% for environmental purposes, and 10% for urban use (CA Water Plan). Irrigation water use and management have tremendous impacts upon ground water quality, power usage, crop yields, surface water supplies and quality, drainage problems, and water availability for transfer to urban uses. For students interested in environmental assessment and protection of water resources, the watershed management and policy areas provide land use planning and management skills for meeting water regulations and law. For students wanting background in water resources the Water Science minor provides marketable skills.

Program Learning Objectives

1. Describe the current state of California and global water resources.
2. Compare human water needs for urban uses such as hygiene and landscape, agricultural uses such as food and fiber, and environmental uses such as fish and riparian habitat.
3. Contrast different types of water rights in California.
4. Demonstrate the ability to effectively communicate concepts of water use and policy.

Minor Requirements and Curriculum

The minor must be completed prior to, or at the same time as, the requirements for the bachelor's degree. A major and a minor may not be taken in the same degree program, and a minor is not required for a degree. Requirements for the minor include:

- At least half of the units must be from upper-division courses (3000-4000 level).
- At least half of the units must be taken at Cal Poly (in residence).
- No more than one-third of the units will be taken with credit-no credit grading (CR/NC), not counting courses with mandatory CR/NC. Departments may further limit CR/NC grading if desired.
- A minimum 2.0 GPA is required in all units counted for completion of the minor.

Code	Title	Units
REQUIRED COURSES		
BRAE 3340	Irrigation Water Management	3
CRP/NR 4408	Water Resource Law and Policy	4
SS 1120	Introductory Soil Science	4
Emphasis Areas		
Select one of the following emphasis areas: ¹		12-13
Irrigation		
BRAE 1239	Engineering Surveying	
BRAE/NR 3349	Water for a Sustainable Society	
BRAE 4440	Agricultural Irrigation Systems	
BRAE 5532	Water Pumps and Wells	
BRAE 5533	Irrigation Project Design	
Water Policy		
AG 4452	Leadership Seminar on Issues Affecting California Agriculture, Food Systems, and Natural Resources	
AGB 3312	Agricultural Policy	
AGB 4412	Advanced Agricultural Policy	
BRAE/NR 3349	Water for a Sustainable Society	
CRP/NR 4404	Environmental Law	
NR 3319 & NR 3320	Watershed Processes and Management and Watershed Processes and Management Laboratory	
NR/SS 4421	Wetlands	
NR 4464	Senior Project - Environmental Policy Analysis	
POLS 3332	World Food Systems	
POLS 3351	Public Policy and Administration	
Watershed Management		
ERSC 3303	Soil Erosion and Water Conservation	

ERSC 4442	Applied Groundwater Hydrology
ERSC 4443	Applied Environmental Contaminant Transport
NR 3306	Natural Resource Ecology and Habitat Management
NR 3319 & NR 3320	Watershed Processes and Management and Watershed Processes and Management Laboratory
NR/SS 4421	Wetlands
SS 4440	Forest and Range Soils

Total Units**23**

¹ Additional prerequisites may be needed to complete this requirement.