

# WATER RESOURCES MANAGEMENT BACHELOR OF SCIENCE DEGREE

The Bachelor's Degree in Water Resources Management introduces students to public policy decisions and statutory mandates that govern water demand, affect water supply, and impact water quality. The concentration in Water Resources Management enables students to develop the knowledge and skills needed to apply organizational theories in leadership and integrated resource management, facilitate the complex nature of intergovernmental relations among local, state, federal, and private organizations, interpret major policies, legislative acts, and regulations governing water resources, analyze water policy issues, and evaluate alternative policy solutions. The program emphasizes the importance of diversity, equity, inclusion, and accessibility (DEIA) in water resource planning and management, ensuring that students understand how equitable policies and inclusive practices contribute to sustainable and socially responsible water governance. Students also explore financial management and budget forecasting functions and facilitate strategic planning and goal-setting processes for water sector organizations.

Employment for graduates occurs in a wide range of fields and sectors, including private, non-profit, and government agencies. Possible career paths include leadership roles in:

- Water Supply Utilities
- Water/Wastewater Treatment Plants
- Regulatory Agencies
- Groundwater and Conservation Districts
- Watershed/River Basin Authorities

Code	Title	Units
<b>Required Courses:</b>		
<b>General Education (GE) Courses:</b>		
ENGL 300	Advanced Writing and Critical Thinking in the Industry Disciplines	4
GIS 400	GIS and Data Analysis in Water Resources Management	4
STAT 300	Applied Statistical Research and Analysis	4
<b>Water Resources Management Courses:</b>		
WRM 301	California Water History	3
WRM 302	Introduction to Water Resources Management	3
WRM 310	Applied and Professional Ethics in the Water Sector	3
WRM 315	Technology and Public Administration	3
WRM 330	Water Law	3
WRM 401	Managing Public Organizations in the Water Sector	3
WRM 402	Water Resources Management and the Public Policy Process	3
WRM 420	Human Resources Administration in the Water Sector	3
WRM 460	Water Resources Budgeting and Financial Management	3
WRM 495	Research Methods in Water Resources Management	3

WRM 498	Internship in Water Resources Management	3
<b>Electives - Select Four Courses:</b>		
WRM 320	Strategic Planning in the Water Sector	3
WRM 325	Water Resources Economics	3
WRM 335	Tribal Water Rights	3
WRM 340	International Environmental Policy	3
WRM 430	Water Sector Leadership and Diversity	3
WRM 440	Collective Bargaining and Labor Relations	3
<b>Culminating Experience Requirement:</b>		
WRM 499A	Applied Research (Capstone) Project in Water Resources Management	3
	or WRM 499B Comprehensive Written Exam in Water Resources Management	
<b>Total Units</b>		<b>60</b>

## Program Learning Outcomes

At the completion of this program, students will be able to:

- a. Engage proactively with stakeholders and community decision makers to promote the utility provider as valued, competent, and trustworthy environmental stewards and the water infrastructure as community assets.
- b. Produce technical documents that respond to the needs of multiple audiences, including international/global audiences of water resources.
- c. Employ project management processes and analytical tools to achieve a sustainable outcome to regulatory compliance and environmental problems.
- d. Develop the skills of utilizing information technologies capabilities in water resources management to track performance, identify variability, and manage performance more effectively and precisely.
- e. Apply key terminology, facts, concepts, principles, historical perspectives and theories to effectively "supply water" and "manage wastewater" infrastructure functions.
- f. Gain comprehensive knowledge of integrated water resources management with specific emphasis on best practices leading to water sustainability and financial viability.
- g. Acquire skills to address contemporary issues related to water resources management and understand their societal, economic, and environmental impacts.
- h. Analyze social justice in the workplace and determine one's own self-concept based on the dimensions of diversity equity, inclusion, and anti-racism.
- i. Articulate the core concepts of sustainable management of water resources from local to state to national and global viewpoints.