

WATER RESOURCES MANAGEMENT



Degrees and Certificates Offered:

- ▶ Water Resources Management Acting: Associate in Arts (A.A.), Certificate of Achievement

Graduates of the Water Resources Management Associate of Arts Degree and certificate program will be qualified to seek entry level employment in the public water supply or wastewater treatment industries and incumbent workers will be qualified for more responsible positions within those industries.

Contact:
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Career Opportunities: Jobs for which program graduates will be qualified or which are on a complementary career track include:

Backflow Program Manager

*Chemist

Construction Inspector

Cross Connection Control Specialist

Electronic Technician

* Engineer, Civil

* Engineer, Electrical

Engineer Technician

Equipment Maintenance Operator

Field Operations Supervisor

GIS/Mapping Specialist

Inspector

Instrumentation and Control Technician

Instrumentation and Control Supervisor

Laboratory Analyst

* Bachelor Degree recommended

Machinist

Mechanical Systems Technician

Meter Maintenance Technician

Plant Operator

Plant Process Control Electrician

Plant Process Control Supervisor

Recycled Water Inspector

*Safety and Risk Manager

Survey Technician

Utility Worker

Wastewater Plant Operator

Wastewater Treatment Superintendent

*Water Distribution Operator

*Water Quality and Treatment Manager

Water Systems Technician

*Bachelor's Degree may be required.

Water Resources Management

A.A. Degree or Certificate of Achievement

The Water Resources Management degree program is designed to prepare students for employment by municipal drinking water and wastewater treatment departments or industrial treatment facilities. Careers in water/wastewater technology generally involve the administration, operation and maintenance of both drinking water and wastewater treatment facilities as well as distribution and collection systems. Gavilan's Water Resources Management Program provides educational courses that prepare students for careers in Water Resources Management. Courses prepare students for certification examinations administered by the State of California as well as those administered by professional associations within the water and wastewater industry. Current instructors are experienced water and wastewater professionals, expert and up-to-date in best-of-breed industry practices. Classes are built around practical examples of real-world scenarios, demonstrations, and field trips whenever possible to maximize understanding of subject matter. Internships are available, too, through Cooperative Work Experience.

Program Learning Outcomes: Students who successfully complete an Associate of Arts Degree in Water Resources Management will:

- ▶ Follow safe practices in the laboratory and in plant operations.
- ▶ Apply chemical, microbiological, and mechanical knowledge and skills to maintain proper water and wastewater plant operations.
- ▶ Apply math and hydraulics skills in proper water and wastewater plant, collection system, and distribution system operations.
- ▶ Identify regulations and operate the plant accordingly.
- ▶ Be able to pass the California licensure examination in the water industry.
- ▶ Interact effectively in oral and written communications.
- ▶ Use computers in water and wastewater plant operation.
- ▶ Demonstrate work ethic and model professional interaction with the public.

To receive an ASSOCIATE DEGREE complete:

REQUIREMENTS listed below.

GENERAL EDUCATION REQUIREMENTS

To receive a CERTIFICATE OF ACHIEVEMENT complete:

REQUIREMENTS listed below.

REQUIREMENTS:

WTRM 101	Introduction to Waste/Wastewater Technology (3 units)
WTRM 102	Beginning Water/Wastewater Mathematics (3 units)
WTRM 103	Introduction to Electrical and Instrumentation Processes (3 units)
WTRM 105	Water Distribution 1 (3 units)
WTRM 106	Beginning Water Treatment Plant Operation (3 units)
WTRM 107	Beginning Wastewater Treatment Plant Operations (3 units)

Electives: Select one of the following:

WTRM 108	Water Distribution 2 (3 units)
WTRM 109	Advanced Water Treatment Plant Operation (3 units)
WTRM 110	Advanced Water/Wastewater Mathematics (3 units)
WTRM 111	Advanced Wastewater Treatment Plant Operation (3 units)
WTRM 112	Applied Hydraulics (3 units)
WTRM 113	Beginning Wastewater Collections (3 units)
WTRM 114	Laboratory Analysis Water/Wastewater (3 units)
WTRM 115	Supervision (3 units)

Electives: Select two of the following:

WTRM 104	Motors/Pumps/Operation & Maintenance (3 units)
WTRM 116	Advanced Wastewater Collections (3 units)
WTRM 117	Water Use Efficiency Practitioner (3 units)
WTRM 118	Introduction to Occupational (3 units)
WTRM 119	Industrial Wastewater Treatment (3 units)
WTRM 120	Pollution Prevention & Stormwater Management (3 units)
WTRM 121	Mechanical Maintenance (3 units)
WTRM 190	Occupational Work Experience (1-4 units)

Total units for the certificate or degree: 25-28 units

Plus completion of general education requirements: 39-42 units

Total units required for AA / AS degree: 60 units

General Education requirements: A student may complete the Gavilan College A.A./A.S. general education, the CSU-GE Breadth or the IGETC pattern, plus sufficient electives to meet a 60 unit total. See pages 49-57 or see a counselor for details.

NOTE: A course may be used to satisfy both general education and major courses. See "Double Counting Rule" on page 47.