

WASTEWATER SCIENCE, CERTIFICATE OF ACHIEVEMENT

The Certificate of Achievement in Wastewater provides students with the technical training they need to pursue a career in the municipal potable water and wastewater industries. Waterworks operators protect public health by ensuring that plant operations comply with state and federally mandated potable water quality and wastewater disposal standards.

Students seeking an Associate Degree in Water Science may choose the Associate in Science in Water to prepare them for a career in potable water treatment, or the Associate in Science in Wastewater to prepare them for a career in wastewater sanitation. Regardless of the option chosen, both paths lead to rewarding careers protecting the health of both the community and the environment at local, state, and federal levels.

Course ID	Title	Units/ Hours
Required Core Courses		
WS V10	Basic Water and Wastewater Systems	3
WS V12	Wastewater Treatment	3
WS V13	Wastewater Collection	3
WS V15	Water Systems Instrumentation and Controls	3
WS V16	Water Quality Protection and Cross-Connection Control	3
WS V17	Water and Wastewater Hydraulics	3
WS V18	Pumps and Motors Maintenance and Operation	3
WS V20	Water System Mathematics	3
WS V21	Water Chemistry and Bacteriology	4
WS V25	Water and Wastewater Management	3
Required Core Units		31
Total Units for the Certificate		31

Two Year Plan

Year 1		
Fall Semester		Units/Hours
WS V10	Basic Water and Wastewater Systems	3
WS V12	Wastewater Treatment	3
WS V25	Water and Wastewater Management	3
Units/Hours		9
Spring Semester		
WS V13	Wastewater Collection	3
WS V16	Water Quality Protection and Cross-Connection Control	3
WS V18	Pumps and Motors Maintenance and Operation	3
Units/Hours		9
Year 2		
Fall Semester		
WS V15	Water Systems Instrumentation and Controls	3
WS V20	Water System Mathematics	3
Units/Hours		6

Spring Semester		
WS V17	Water and Wastewater Hydraulics	3
WS V21	Water Chemistry and Bacteriology	4
Units/Hours		7
Total Units/Hours		31

One Year Plan

Year 1		
Fall Semester		Units/Hours
WS V10	Basic Water and Wastewater Systems	3
WS V12	Wastewater Treatment	3
WS V15	Water Systems Instrumentation and Controls	3
WS V20	Water System Mathematics	3
WS V25	Water and Wastewater Management	3
Units/Hours		15
Spring Semester		
WS V13	Wastewater Collection	3
WS V16	Water Quality Protection and Cross-Connection Control	3
WS V17	Water and Wastewater Hydraulics	3
WS V18	Pumps and Motors Maintenance and Operation	3
WS V21	Water Chemistry and Bacteriology	4
Units/Hours		16
Total Units/Hours		31

Upon successful completion of this program, students will be able to:

- Analyze the fundamentals of chemistry, physics, microbiology, and math as they relate to the water industry.
- Understand the foundational engineering and operations used in wastewater collection systems and at wastewater treatment facilities.
- Tie collection system criteria and wastewater treatment requirements to local, state, and federal regulatory standards.
- Understand the state licensing requirements for entering into and advancing in the water industry.