Water and Wastewater Technology

Career Technical Education Division

Program Description

A study of the principles of water and wastewater disposal and purification including municipal and industrial wastewater collection and treatment. The program will satisfy most of the requirements for certification of water and wastewater treatment personnel.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained upon completion of the 28 1/2-unit major. The Associate in Science Degree can be obtained upon completion of 60 units, including the major, the general education requirements, and electives.

Required Courses

	Units
WATER 100–Intro. to WW Treatment	4
WATER 102–Sanitary Chemistry I	4
WATER 104–Intro. to Water Supply & Treatment	3
WATER 105–Wastewater Treatment	3
WATER 106–Instrumentation & Controls	3
WATER 107–Math of WW Treatment	4
BIOSC 14–Principles of Microbiology	4
CHEM 160–Introductory Chemistry	3.5
	28.5

Recommended Electives:
WATER 120, 121
OCCED 90, 91

WATER 100 **4 Units**

Introduction to Wastewater Treatment
Course Advisory: SCC minimum English standard. Study of municipal and industrial wastewater collection and wastewater treatment methods, protection of ground water and receiving waters, and effects of pollutants on receiving waters. *Four hours lecture.*

WATER 102 **4 Units**

Sanitary Chemistry
Prerequisite: CHEM 160. Course Advisories: SCC minimum English and math standards. Study of the theory and demonstration of laboratory techniques for control tests of water purification. Emphasis is placed on process control including pH, chlorine residual, coliform, turbidity, BOD, solids, and interpretation of lab test results. Mandatory field trips will be taken to water treatment plants and water quality laboratories. *Four hours lecture.*

WATER 104 **3 Units**

Introduction to Water Supply and Treatment
Course Advisory: SCC minimum English standard. Study of the elementary engineering aspects of design, operation, process control and maintenance of water treatment plants and facilities. *Two and one-half hours lecture, one and one-half hours lab.*

WATER 105 **3 Units**

Wastewater Treatment
Prerequisite: WATER 100. Course Advisory: SCC minimum English standard. Study of the elementary engineering aspects of design, operation process control, and maintenance of wastewater treatment plants and facilities. *Two and one-half hours lecture, one and one-half hours lab.*

Water and Wastewater

WATER 106 **3 Units**

Instrumentation and Control
Course Advisory: SCC minimum English standard. Study of pneumatic, mechanical and electronic control systems and components. Includes a basic description and explanation of the operation of instruments and controls for water and wastewater plants. Typical performance characteristics, accuracy, and applications of instruments are studied. *Three hours lecture.*

WATER 107 **4 Units**

Mathematics of Water and Wastewater Treatment
Course Advisories: SCC minimum English and math standards. Study of hydraulics and calculations used in the design, operation, process control and the maintenance of treatment plants and facilities. *Four hours lecture.*

WATER 120 **2 Units**

Distribution Systems Maintenance
Course Advisory: SCC minimum English standard. Study of the operation and maintenance of water distribution systems covering the design, construction and the functioning of these systems. *Two hours lecture.*

WATER 121 **2 Units**

Collection Systems Maintenance
Course Advisory: SCC minimum English standard. Study of the operation and maintenance of wastewater collection systems covering the design, construction and functioning of these systems. *Two hours lecture.*

Special Topics
These courses, numbered 148, are courses of specialized interest centered on changing knowledge and important issues in the field. Announcements of Special Topics courses appear in the Schedule of Classes.