

**Water/Wastewater Treatment - Water Treatment**

CERTIFICATE OF ACHIEVEMENT (CoA)

REQUIRED CREDITS: 31

DEGREE CODE: WWTWAT-CT

**DESCRIPTION**

This program prepares students for a career in water and/or wastewater treatment maintenance. Students learn to maintain and operate the machinery used in facilities for the treatment of water supplies in urban areas and/or for wastewater treatment that is released back into the environment.

**STUDENT LEARNING OUTCOMES**

- Describe the fundamentals of water and/or wastewater treatment.
- Identify laws and regulations that apply to water and/or wastewater treatment.
- Differentiate the various treatment methodologies and technologies applicable to water and/or wastewater treatment.
- Explain pump operation and maintenance for water and/or wastewater treatment operation.

**PLEASE NOTE** - The courses listed below may require a prerequisite or corequisite. Read course descriptions before registering for classes. All MATH and ENG courses numbered 01-99 must be completed before reaching 30 total college-level credits. No course under 100-level counts toward degree completion.

**GENERAL EDUCATION REQUIREMENTS (3 CREDITS)**

**COMMUNICATIONS (3 credits)**

Required: COM 115 Applied Communication

**SPECIAL PROGRAM REQUIREMENTS (28 CREDITS)**

**CORE REQUIREMENTS (28 credits)**

|  |                                     |   |
|--|-------------------------------------|---|
| WWT 105B   | Water Treatment Operations I        | 3 |
| WWT 106B   | Water Treatment Operations II       | 3 |
| WWT 115B   | Water/Wastewater Mathematics I      | 3 |
| WWT 120B   | Pump Operation and Maintenance      | 3 |
| WWT 205B   | Water Distribution                  | 3 |
| WWT 215B   | Water/Wastewater Mathematics II     | 3 |
| WWT 220B   | Water Quality Analysis              | 4 |
| WWT 225B   | Wastewater Collection Systems       | 3 |
| WWT 230B   | Current Issues                      | 3 |
| <b>Choose one from the following (0-3 credits)</b> |                                     |   |
| IS 100B  | Core Computing Competency           | 0 |
| IS 101   | Introduction to Information Systems | 3 |

Computation included in WWT 115B

Human Relations included in WWT 230B

**FULL-TIME STUDENT DEGREE PLAN**

*Plan can be modified to fit the needs of part-time students by adding more semesters.*

| FIRST SEMESTER                                       | Credits   |
|--|-----------|
| COM 115 Applied Communication                        | 3         |
| WWT 120B Pump Operation and Maintenance <sup>1</sup> | 3         |
| WWT 220B Water Quality Analysis <sup>2</sup>         | 4         |
| WWT 105B Water Treatment Operations I1               | 3         |
| <b>TOTAL CREDITS</b> .....                           | <b>13</b> |

| SECOND SEMESTER                                     | Credits   |
|---|-----------|
| WWT 115B Water/Wastewater Mathematics <sup>3</sup>  | 3         |
| WWT 225B Wastewater Collection Systems <sup>4</sup> | 3         |
| WWT 230B Current Issues <sup>5</sup>                | 3         |
| WWT 106B Water Treatment Operations II <sup>5</sup> | 3         |
| <b>TOTAL CREDITS</b> .....                          | <b>12</b> |

| THIRD SEMESTER                                     | Credits    |
|--|------------|
| WWT 215B Water/Wastewater Mathematics <sup>1</sup> | 3          |
| WWT 205B Water Distribution <sup>1</sup>           | 3          |
| IS 100B or IS 101                                  | 0-3        |
| <b>TOTAL CREDITS</b> .....                         | <b>6-9</b> |

**DEGREE PLAN TOTAL CREDITS**..... **31-34**

<sup>1</sup>This course offered in the Fall only.

<sup>2</sup>This course offered in the Fall only; prereq of WWT 102B and WWT 115B.

<sup>3</sup>This course offered in the Spring only; coreq of Math 104B and prereq of WWT 101B or 105B.

<sup>4</sup>This course offered in the Spring only; prereq of WWT 215B.

<sup>5</sup>This course offered in the Spring only.

- NOTE**
- Course numbers with the “B” suffix may be non-transferable for a NSHE baccalaureate degree.
  - Course numbers with the “H” suffix are designated Honors-level courses and can be used to fulfill equivalent general education requirements. For more information visit [www.csn.edu/honors](http://www.csn.edu/honors).
  - In no case, may one course be used to meet more than one requirement except for the Values and Diversity general education requirement (only AA, AS, and AB degrees) which may be used to fulfill the corresponding general education or emphasis requirement.
  - Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.

