

# Applied Hydraulics

## Course Overview

This course is designed to acquaint students with the hydraulics involved in water treatment, storage and distribution, and the math that applies to hydraulic principles. Course material consists of reading assignments, video lectures, review questions, study problems and lesson quizzes.

Course completion requires that the student successfully complete each component of each individual lesson. Review questions and written assignments must be submitted either online or uploaded in a Word document for the professor's review. Lesson quizzes have a minimum passing score of 70%.

Upon successful completion of the course requirements, students will receive a certificate of completion for the Applied Hydraulics course, which is applicable toward a Certificate in Water Treatment Technology from American Water College.

## Required Texts

Textbook: *Basic Science Concepts and Applications*, Principles and Practices of Water Supply Operations series

Edition: Fourth Edition

Author: Nicholas G. Pizzi

ISBN: 1-58321-778-9

Workbook: *Basic Science Concepts and Applications Student Workbook*, Principles and Practices of Water Supply Operations series

Edition: Fourth Edition

ISBN: 1-58321-799-1

## Educational Objectives

- To provide students with an overview of density and specific gravity and the mathematical concepts that apply
- To provide students with an overview of pressure and force, and the mathematical concepts that apply
- To acquaint students with the principles of piezometric surface and hydraulic grade lines
- To acquaint students with head, head loss, and the mathematical applications that apply
- To acquaint students with pumps and calculating their efficiency

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- To acquaint students with flow rate problems encountered in the water treatment and distribution process
- To acquaint students with thrust, thrust control, and the mathematical concepts that apply

## **Evaluation**

Students will be graded on their performance on each lesson quiz, and their course participation. Unless each unit is completed, the student will not be permitted to advance to the next lesson, and the student will not be awarded credit for completion until all assignments, quizzes and lectures are completed. Please contact our office with any questions.

## **Support**

Students can contact our student support staff with any course-related, content-related or technology-related inquiries. Our office hours are Monday-Thursday, 9 to 5 PST, and Friday 9-12 PST.

## **Contact Info:**

Phone Number: (661) 940-1133

General Course Inquiries: [Info@americanwatercollege.org](mailto:Info@americanwatercollege.org)

Student Support Manager direct email: [Amy@americanwatercollege.org](mailto:Amy@americanwatercollege.org)

IT Manager direct email: [Katie@americanwatercollege.org](mailto:Katie@americanwatercollege.org)

Additionally, students are encouraged to contact their professor directly with any questions or comments.