



Basic Water Math Course Syllabus

Purpose

This course is designed to teach you Basic Water Math concepts.

Topics

Basic Water Math

Unit Conversions

Working with Formulas

Understanding Percentages

Calculating Area

Calculating Volume

Weight Volume Relationships

Force-Pressure-Head

Velocity and Flow Rate

Pumps

The Metric System

Problem Solving

CEUs (Contact Hours)

Upon completion of this course, you will receive a certificate for 1.1 CEUs (11 contact hours).

Completion Requirements

In order to receive [IACET CEU](#) credit for this course, you must complete the following:

- Complete each individual lesson module by watching the video lecture, completing the lesson handout, and passing the lesson quiz. A score of 70% or higher is required to pass each quiz.

Once you have completed all of these elements, your course completion certificate will be automatically placed into your learning account for printing/downloading. It will remain in your learning account even after your course access has expired.

Learning Objectives

Unit Conversions

Upon completion of this lesson the student will be able to:

- Define what a unit is
- Define what an equivalent is
- Demonstrate how units and equivalents are used to solve math problems

Working with Formulas

Upon completion of this lesson the student will be able to:

- Define what a formula is
- Demonstrate how a formula is used
- Demonstrate how formulas are rearranged
- Demonstrate how to solve math problems using formulas

Understanding Percentages

Upon completion of this lesson the student will be able to:

- Demonstrate how to convert between fractions and percentages
- Demonstrate how to convert between decimals and percentages

Calculating Area

Upon completion of this lesson the student will be able to:

- Demonstrate how to solve for the area of a square
- Demonstrate how to solve for the area of a rectangle
- Demonstrate how to solve for the area of a circle
- Demonstrate how to solve for the area of a triangle

Calculating Volume

Upon completion of this lesson the student will be able to:

- Demonstrate how to solve for the volume of a cube
- Demonstrate how to solve for the volume of a cylinder
- Demonstrate how to solve for the volume of a cone
- Demonstrate how to solve for the volume of a sphere

Weight/Volume Relationships

Upon completion of this lesson the student will be able to:

- Recall how many pounds one gallon of water weighs
- Recall how many gallons are in one cubic foot
- Recall how many pounds one cubic foot of water weighs
- Recall how many liters are in one gallon
- Recall how many pounds are in one kilogram
- Discuss and demonstrate how these weight and volume relationships are used to solve math problems

Force-Pressure-Head

Upon completion of this lesson the student will be able to:

- Define force
- Define pressure
- Define water head
- Recall how many psi (pounds per square inch) is one foot of water head
- Discuss and demonstrate how to solve math problems involving force-pressure-head calculations

Velocity and Flow Rate

Upon completion of this lesson the student will be able to:

- Define velocity
- Demonstrate how velocity is calculated
- Define flow rate
- Demonstrate how flow rate is calculated

Pumps

Upon completion of this lesson the student will be able to:

- Define horsepower
- Define water horsepower
- Define break horsepower
- Define motor horsepower
- Discuss and demonstrate how to solve pump math problems involving horsepower

The Metric System

Upon completion of this lesson the student will be able to:

- Define what metric system units
- Demonstrate how to convert between weight and volume measurements in the metric system.
- Demonstrate how to convert between metric units and standard units

Problem Solving

Upon completion of this lesson the student will be able to:

- Define the five steps to problem solving
- Determine if all five steps are needed to solve a specific problem
- Explain how the five steps work
- Apply the five steps problem solving method to water math problems

Support

Students can contact our student support staff with any course-related, content-related, or technology-related inquiries.

Our office hours are Monday-Thursday, 9-5 CT, and Friday 9-12 CT.

Contact Info

Phone Number: (661) 874-1655

General Course Inquiries: Info@americanwatercollege.org