



Developer and Owner – WWOTC

Online Course – Instructor Led

Pumps & Pumping Hydraulics

January 20-21, 2021 (8:30 – 12:30 AST)

Course Objective / Description

This “specialty” course has been custom-designed for plant operators or maintenance personnel. Mathematical applications will be performed as part of this course. Proficiency in math operations and unit conversions is required.

What will be covered:

- Velocity and flow rate
- Force - pressure and head
- Types of pumps and applications
- Basic pump components
- Pump performance characteristics & system characteristics - centrifugal pumps, friction losses, water hammer, cavitation, flow control and measurement
- Horsepower and related calculations

Timeline	Lesson	Description	Contact Hours
Day 1			
8:30-9:00	Lesson 1	Course Overview/Introduction of Subject Matter and Concepts	0.5
9:00-10:30	Lesson 2	Force, Pressure, and Head	1.5
10:30-10:45		Break	0.25
10:45-12:30	Lesson 3	Velocity and Flow Rates	1.75
Day 2			
8:30-10:00	Lesson 5	Pump Hydraulics	1.5
10:00-10:30	Lesson 6	Types of Pumps	0.5
10:30-10:45		Break	0.25
10:45-11:15	Lesson 7	Chemicals and Rodding	0.5
11:15-12:30	Lesson 8	Pump Selection	1.25
		Total Instruction/Contact Time:	7.0

Instructor:
David Russell- Senior Training Specialist
CEU: 0.7

Pumps & Pumping Hydraulics

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Name: _____

Company: _____

Company Mailing Address _____

City, Province: _____ Postal Code: _____

Phone: _____ Email: _____

ACWWA Membership #: _____ WEF Membership #: _____
If no membership number is listed, you will be invoiced as a non-member. See pricing below.

Fee for ACWWA or WEF Members & Employees of UTILITY Members

Course: \$345.00 + \$51.75 HST (15%) = \$396.75

Fee for Non – Members

Course: \$370.00 + \$55.50 HST (15%) = \$425.50

Invoices will be sent to the address listed above.

PO number to be included on the invoice _____

Payment can be made by Visa, Master Card or cheque.

Card Holder's Name _____

Credit Card Number _____ Expiry _____

Signature _____

Email address for credit card receipt _____

Cheques should be made payable to:

ACWWA

PO Box 28141 · Dartmouth, NS · B2W 6E2

Phone 902-434-6002 Fax 902-435-7796