



COURSE OUTLINE: OEL870 - WATER DISTRIB 1 AND2

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Approved: Lori Crosson, Director, E-Learning and Continuing Education

Course Code: Title	OEL870: WATER DISTRIBUTION CERT LEVEL 1 AND 2
Program Number: Name	
Department:	DISTANCE EDUCATION
Semesters/Terms:	20S, 20F, 21W
Course Description:	This course provides basic understanding and knowledge of practices and applications relevant to sources of water supply, distribution system components, pipe network, pumping systems, water quality monitoring and water wells. Related concepts in hydraulics, equipment, safety and legislation are reinforced.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Course Evaluation:	Passing Grade: 50%, D
Books and Required Resources:	Water and Wastewater Technology by Mark J. Hammer and Hammer Junior Publisher: Prentice Hall, Edition: 7th edition ISBN: 0135114047

Course Outcomes and Learning Objectives:	Course Outcome 1	Learning Objectives for Course Outcome 1
	Public health	-Understand the importance of safe drinking water and related water regulation
	Course Outcome 2	Learning Objectives for Course Outcome 2
	Sources of water supply	-List the main sources of water supply and characteristics as related to suitability to drinking water supplies
	Course Outcome 3	Learning Objectives for Course Outcome 3
	Water storage & Distribution	-Compare surface water supplies and groundwater supplies
	Course Outcome 4	Learning Objectives for Course Outcome 4
	Piping network	-Describe various types of intake devices for surface water sources
	Course Outcome 5	Learning Objectives for Course Outcome 5
Pumping systems	-Explain the role of storage in water distribution systems and list common used storage devices	
Course Outcome 6	Learning Objectives for Course Outcome 6	
Hydrants, valves and fittings	-Apply the concept of pressure control within a water distribution system	

	Course Outcome 7	Learning Objectives for Course Outcome 7			
	Sampling and analysis	-Describe disinfection methods and when it may be required within a distribution system -Collect water distribution samples for monitoring and regulatory purposes			
	Course Outcome 8	Learning Objectives for Course Outcome 8			
	Water quality monitoring	-Collect water distribution samples for monitoring and regulatory purposes			
	Course Outcome 9	Learning Objectives for Course Outcome 9			
	Secondary Disinfection	-Knowledge of pipes and piping network including hydrants and fittings			
	Course Outcome 10	Learning Objectives for Course Outcome 10			
	Water Wells	-Describe types of wells, well pumps and operation of water wells			
Evaluation Process and Grading System:	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>TESTS (3)</td> <td>100%</td> </tr> </tbody> </table>	Evaluation Type	Evaluation Weight	TESTS (3)	100%
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TESTS (3)	100%				
Date:	March 9, 2020				
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.				