

Training Evaluation Request
Oregon Environmental Services Advisory Council
Watura
Math Grade II

Course title: Math Grade II

Drinking Water CEUs: 2.5 h

Wastewater CEUs: 2.5 h

Instructor bio: **Mike PING** is a licensed Professional Engineer with a Bachelor of Science in Electrical Engineering from Clemson University. He brings over 24 years of experience in the water and wastewater industry and is an active member of the WEA.

Course description: This course equips water and wastewater operators with the essential math skills needed for everyday field and facility operations. They will learn how to apply geometry, unit conversions, and hydraulic principles to solve practical problems in treatment and distribution systems. The course also introduces key water-quality and operational calculations that support effective decision-making. Through guided examples and practice, operators will build confidence in applying math to real-world scenarios across water and wastewater operations.

Learning goals:

- Perform basic geometry and unit-conversion calculations related to area, volume, and slope
- Calculate key hydraulic parameters, including flow rate, velocity, force, and detention time
- Use basic water-quality formulas to determine dosage, density, and percent removal
- Apply operational math to evaluate water use, power needs, pumping performance, and basic costs in a water or wastewater system

Tracking attendance method:

The e-learning platform offers a highly interactive experience designed to engage learners at every stage. It begins with an initial test to assess knowledge and tailor the learning journey. The course includes short, focused videos interspersed with mandatory training quizzes that reinforce key concepts and ensure active participation. Students are required to watch every video entirely and to answer practice questions before advancing to the next course module. Students cannot skip course content. A final quiz at the end of each chapter evaluates overall comprehension and certifies the learner's mastery of the material. Students must obtain a minimum score of 70% for every chapter's final quiz to successfully complete the course and obtain the certificate of attendance. The platform automatically tracks each learner's learning time. The real learning time is indicated alongside the delivered credits in the course completion certificate.

Course outline: Math Grade II

Initial Test		10 min
1. Geometry and Conversions	1.1. Course Overview	2 min
	1.2. Area Calculations with Conversions	6 min
	1.3. Volume Calculations with Conversions	6 min
	1.4. Slope Calculations	6 min
	1.5. Activity - Practice Test	3 min
	1.6. Chapter 1 - Fact Sheets	1 min
	Chapter final test	6 min
2. Water Movement Calculations	2.1. Flow Rate Calculations	6 min
	2.2. Velocity Calculations	6 min
	2.3. Force Calculations	6 min
	2.4. Detention Time Calculations	6 min
	2.5. Activity - Practice Test	3 min
	2.6. Chapter 2 - Fact Sheets	2 min
	Chapter final test	8 min
3. Water Quality Calculations	3.1. Density Calculations	6 min
	3.2. Dosage Calculations	6 min
	3.3. Percent Removal Calculations	8 min
	3.4. Activity - Practice Test	3 min
	3.5. Chapter 3 - Fact Sheets	1 min
	Chapter final test	8 min
4. Operational Math	4.1. Water Use Calculations	6 min
	4.2. Electrical Power Calculations	7 min
	4.3. Pumping and Horsepower Calculations	10 min
	4.4. Basic Financial Math	10 min
	4.5. Activity - Practice Test	4 min
	4.6. Chapter 4 - Fact Sheets	2 min
	Chapter final test	8 min
Total Learning Time		156 min
Requested Contact Hours		2.5 h