DW 102

● ● ○ Intermediate 45 hours 3 modules · 20 lessons

Filtration, Disinfection & Specialty Treatment

Filter operation and backwash, chlorine disinfection with CT and byproduct control, and corrosion control, fluoridation, iron/manganese, softening, taste and odor, membranes and adsorption.

45	3	20	1,333	108	9	1,167
HOURS OF TRAINING	MODULES	LESSONS	STUDY CARDS	SCENARIOS	3D SIMULATORS	EXAM QUESTIONS

COURSE OBJECTIVES

By the end of this course you will be able to:

1. Operate and optimize rapid gravity filters: head loss, run length, backwash rate and bed expansion.
2. Interpret turbidity performance requirements and filtration log credits.
3. Explain chlorine chemistry, breakpoint, residuals and chloramines; calculate CT and inactivation ratios.
4. Control disinfection byproducts (TTHM/HAA5) and manage distribution residuals and nitrification.
5. Apply corrosion-control, fluoridation and softening principles and dose chemicals correctly.
6. Remove iron and manganese and manage taste-and-odor problems.
7. Explain membrane and adsorption processes: flux, recovery, fouling and cleaning.

WHAT YOU WILL LEARN

Filtration
Media, hydraulics, backwash, filter-to-waste and troubleshooting.

Disinfection
Chlorine chemistry, CT, gas and hypochlorite systems.

DBP & distribution quality
TTHM/HAA5, water age and nitrification.

Corrosion & fluoridation
Stability, orthophosphate, pH adjustment and safe fluoride feed.

Specialty treatment
Fe/Mn, softening, taste and odor, membranes and GAC.

Chemical feed math
Dose, lb/day, solution strength and calibration.

MAJOR TOPICS COVERED

Module 4	Filtration	7 lessons
Module 5	Disinfection & Disinfection Byproducts	6 lessons
Module 6	Corrosion Control, Fluoridation, Iron/Manganese, Softening, Taste & Odor, Membranes & Adsorption	7 lessons

COURSE HIGHLIGHTS

- **45 hours** of structured, self-paced instruction with active-time tracking.
- **9 interactive 3D simulators** — rotate, explode and cut away real equipment, then change the controls and watch the numbers respond.
- **108 field scenarios** with background, decision points and worked answers.
- **1,333 study cards**, 20 printable checklists and hands-on calculators.
- **1,167 practice questions** with timed, exam-style mock tests.

WHO IT'S FOR

Operators and operators-in-training who run filters, disinfection and chemical feed systems at drinking-water plants.

BEFORE YOU START

DW 101 recommended.

WHERE TO NEXT

DW 103 — Laboratory, Operations & Safety

Start learning Create a free account at tryetech.com, open **Drinking Water (Waterworks) Operator Prep** and begin with Module 4.