WW 102

● ● ○ Intermediate 45 hours 3 modules · 21 lessons

Biological, Nutrient & Advanced Treatment

Activated sludge process control, fixed-film and advanced biological systems, nutrient removal, tertiary treatment and disinfection.

45	3	21	1,333	105	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. Control activated sludge with MLSS, F/M, MCRT, SVI, RAS and WAS calculations and DO management.
2. Diagnose bulking, foaming, rising sludge and nitrification problems.
3. Operate trickling filters, RBCs, SBRs, MBRs and IFAS systems and calculate loadings.
4. Explain biological nitrogen removal (MLE, A2O, SBR) and phosphorus removal (biological and chemical).
5. Operate filtration, UV and chlorine contact/dechlorination for permit compliance.
6. Interpret process data and make safe, incremental control changes.
7. Apply operator math to real process scenarios.

WHAT YOU WILL LEARN

Activated sludge
Oxygen demand and transfer, solids inventory and settleability.

Fixed-film & advanced
Trickling filters, SBR cycles and MBR flux and fouling.

Nutrient removal
Nitrification/denitrification and alum/ferric phosphorus control.

Tertiary & disinfection
Filters, UV, chlorine contact and dechlorination.

Process control math
F/M, MCRT, SVI, RAS and WAS.

Troubleshooting
Reading the plant from lab and field data.

MAJOR TOPICS COVERED

Module 4	Activated Sludge Process Control	7 lessons
Module 5	Fixed-Film & Advanced Biological Processes (Trickling Filters, RBCs, SBR, MBR, IFAS)	7 lessons
Module 6	Nutrient Removal, Tertiary Treatment & Disinfection	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.
- **105 field scenarios** with background, decision points and worked answers.
- **1,333 study cards**, 21 printable checklists and hands-on calculators.
- **1,167 practice questions** with timed, exam-style mock tests.

WHO IT'S FOR

Operators who run aeration basins, clarifiers, trickling filters, SBR/MBR systems and disinfection at wastewater plants.

BEFORE YOU START

WW 101 recommended.

WHERE TO NEXT

WW 103 — Solids, Laboratory, Equipment & Safety

Start learning Create a free account at tryetech.com, open **Wastewater Operator Prep** and begin with Module 4.