

Training Evaluation Request
Oregon Environmental Services Advisory Council
Watura
Activated Sludge Microbiology

Course title: Activated Sludge Microbiology

Drinking Water CEUs: 0 h

Wastewater CEUs: 1.0 h

Instructor bio: After completing a degree in Water Sciences and Technologies in Montpellier, followed by a Master's degree from the École Normale Supérieure and a PhD from the National Institute of Applied Sciences (INSA) in Lyon, **Roger PUJOL** has spent his entire career in the field of wastewater treatment. For 15 years, Roger PUJOL worked closely with local authorities, regulatory agencies, and regional branches of the national government. During this time, he also gained valuable experience in wastewater treatment at the National Institute for Research in Science and Technology for Agriculture and the Environment, where he worked as an engineer and later became head of the water treatment department. In 2000, he became National Technical Advisor for water treatment plants within Lyonnaise des Eaux (now SUEZ) and was responsible for coordinating wastewater utilities.

Course description: Activated sludge is a process where microorganisms break down biodegradable matter in wastewater. This process is essential for treating wastewater to meet quality standards and protect the environment. In this course, operators will learn about the microbiology of activated sludge and common treatment problems and troubleshooting.

Learning goals:

- Describe the role of key microorganisms in wastewater treatment
- Describe the main activated sludge treatment problems

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: Activated Sludge Microbiology

Initial Test		5 min
1. Activated Sludge Microbiology	1.1. Course Overview	1 min
	1.2. Activated Sludge Ecosystem	5 min
	1.3. Microfauna in Activated Sludge	4 min
	1.4. Biomass Oxygen Requirements	5 min
	1.5. Nutrients in the Activated Sludge Process	4 min
	1.6. Sludge Production	4 min
	1.7. Chapter 1 - Fact Sheets	5 min
	Chapter final test	5 min
2. Activated Sludge Treatment Problems	2.1. Filamentous Bacteria	4 min
	2.2. Foaming	4 min
	2.3. Denitrification in the Secondary Clarifier	4 min
	2.4. Sludge Bulking	4 min
	2.5. Course Glossary	3 min
	2.6. Chapter 2 - Fact Sheets	5 min
	Chapter final test	5 min
Total Learning Time		67 min
Requested Contact Hours		1 h