



Course Name	Wastewater Treatment Processes
Credit Hours	2 Hours
Instructor(s)	Ralph Stevens
Fee	\$29.00

Course Description

This course provides an overview of wastewater treatment, including the physical separation of solids, chemical treatment processes, biological processes, and solids treatment and disposal.

Learning Objectives

After completing this course, the licensee should be able to:

- List and define the different stages of treatment that can be found at a modern wastewater treatment plant.
- List the various solids separation processes.
- List the equipment used in each solids separation process.
- Describe how each piece of equipment involved in solids separation operates.
- Determine appropriate means of treating sewage and wastewater chemically to reduce pollution.
- Identify the differences between a suspended-growth or fixed-growth biological treatment process.
- Define sludge.
- Describe how to treat sludge.
- List the major units involved in each sludge treatment process.
- List the popular methods of sludge disposal.

Equipment Requirements

You must have an active, working internet connection to access this course online, as well as a platform to access the internet, such as a computer, tablet, or phone. All popular web browsers are supported, including Google Chrome, Mozilla Firefox, Safari, and Opera. No specialized software, speaker, microphone, or web camera is required.

Schedule and Location

This course is available online at any time at www.AYPOTech.com. Upon enrolling in the course, students will have access for 365 days or until the agency-issued course expiration date, whichever comes first. After the access expiration date, the student may re-activate their course if the course approval has not expired. If they do not re-activate, the course will be removed from

the student's account and any progress in the course will be lost. Before the access expiration date, the student may sign in and out of the course as many times as needed to complete the course.

Student Support

Both general and technical support is available to the student before, during, and after taking the course online. Students have access to general customer support via phone, chat, and email. Students have access to the course instructor via email. All questions, concerns, and comments received will be responded to within one business day.

Participation/Interactivity Verification

Timed Logs - Per our company's record retention policy, each student's every log-in, log-out, and lesson/assessment completion time is tracked and retained as part of the student record.

Review Questions - After each section of text, students must answer a review question. Students cannot progress in the course until the question between sections has been answered correctly.

Global Timer - Students will not get credit until they spend a minimum of 120 active minutes total in the course.

Identity Verification

Unique Username/Password - Each student that wants to complete a training course with us must create an account by registering a unique personal email address and password. The student must enter this unique identifier every time they take a break from the course.

Assessment Details

Review Questions - The student must successfully answer all review questions between sections to get credit for the course. If their first response is incorrect, students will have to try again until they choose the correct answer.

Wastewater Treatment Processes Timed Syllabus

Section	Topic	Questions	Minutes*
	Overview of Wastewater Treatment		
1	Purpose of Treatment	1	2.0
2	Sources of Wastewater	1	1.7
3	Wastewater Collection Systems	1	2.2
4	Typical Treatment Facilities	1	1.4
5	Influent	1	1.9
6	Preliminary Treatment	1	1.8
7	Primary Treatment	2	2.7
8	Secondary Treatment	1	3.8
9	Tertiary Treatment	1	1.7
10	Disinfection and Effluent Discharge	1	1.7
11	Solids Handling	1	2.6
	Physical Separation of Solids		
12	Screening	2	4.1
13	Grinding	1	1.7
14	Grit Removal	2	5.0
15	Sedimentation	1	3.1
16	Factors Affecting Settling Rates	1	2.0
17	Types of Clarifiers	1	2.6
18	Air Floatation	1	1.9
19	Filtration and Effluent Disposal	2	4.1
	Chemical Treatment Processes		
20	Solids in Wastewater	1	1.9
21	Chemical Coagulants	2	4.0
22	Phosphate Removal	1	1.8
23	Chemical Clarification Equipment	1	1.6
24	Disinfection	2	2.8
25	Factors Affecting Disinfection	1	2.1
26	Disinfection with Chlorine	2	3.7
27	Equipment Used in Chlorine Feeding	2	4.5
	Biological Processes		
28	Lagoons	1	2.6
29	Activated Sludge	4	7.4
30	Aeration with Pure Oxygen	1	2.0
31	Trickling Filters	1	1.8
32	Distribution Systems	1	1.6
33	Trickling Filter Operations	1	2.0
34	Synthetic Media	1	1.5
35	Activated Biofilter Processes (ABF)	1	2.0

36	Rotating Biological Contactors (RBC)	1	1.8
37	Secondary Clarifiers	1	1.8
	Solids Treatment and Disposal		
38	Three Processes	2	3.3
39	Sludge Conditioning	3	6.6
40	Thickening and Dewatering	1	3.1
41	Drying Beds	2	3.8
42	Lagoons	1	1.5
43	Vacuum Filtration and Filter Presses	1	3.0
44	Further Reduction of Water Content	1	1.8
45	Composting	1	1.5
46	Ultimate Disposal	2	4.0
	Totals:	62	123
	Student Minimum Time Required:		120