

Umpqua Community College
WQT 227

Wastewater Treatment II, Solids Treatment

Course Outline

COURSE DESCRIPTION

This course is the second in the series on the fundamentals of wastewater treatment, focusing on solids handling and support systems. Course content will help students prepare for the Level I Wastewater Treatment Operator Certification exam.

COURSE OUTCOMES

Students who successfully complete this course will:

1. Describe the basics of solids handling in wastewater treatment.
2. Explain the purpose and processes of solids thickening and solids dewatering, including the monitoring systems used to measure process performance.
3. Describe the purpose and processes of solids digestion in wastewater treatment, including the monitoring systems used to measure process performance.
4. Summarize the purpose and function of auxiliary systems, including pumps and pump stations, aeration systems, electrical and electronic systems, and laboratory testing

COURSE TEXTBOOK

“Wastewater Treatment Fundamentals II, Solids Handling and Support Systems, 1st Edition, Water Environment Federation & Association of Boards of Certification, 2021, ISBN: 978-1-57278-361-4

SCHEDULE OF ASSIGNMENTS:

Week	Topics and Reading	Assessments
1	Topic: Introduction to Solids Handling Text & Lesson: Chapters 1 Math:	Assignments Discussion Quiz
2	Topic: Thickening Text & Lesson: Chapter 2 Math:	Assignments Discussion Quiz
3	Topic: Aerobic Digestion Text & Lesson: Chapter 3 Math:	Assignments Discussion Quiz
4	Topic: Anaerobic Digestion Text & Lesson: Chapter 4 Math:	Assignments Discussion Quiz
5	Topic: Dewatering Text & Lesson: Chapters 5 Math:	Assignments Discussion Quiz
6	Topic: Electrical Fundamentals and Motors Text & Lesson: Chapter 6 Math:	Assignments Discussion Quiz

7	Topic: Pumps and Lift Stations Text and Lesson: Chapter 7 Math:	Assignments Discussion Quiz
8	Topic: Aeration Systems Text & Lesson: Chapter 8 Math:	Assignments Discussion Quiz
9	Topic: Laboratory Procedures Text & Lesson: Chapter 9 Math:	Assignments Discussion Quiz
10	Topic: Chemical Storage, Handling, and Feeding Text & Lesson: Chapter 10 Math:	Assignments Discussion Quiz
11	Final Exam	