

**Umpqua Community College**  
**WQT 226**

*Wastewater Treatment I, Liquids Treatment*

**Course Outline**

**COURSE DESCRIPTION**

This course is the first in the series on the fundamentals of wastewater treatment, with focus on liquid treatment. Course 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 biological treatment of wastewater.
2. Demonstrate basic knowledge of nutrient removal from wastewater.
3. Describe the processes of wastewater disinfection.
4. Employ basic mathematical computations relating to wastewater treatment process control.

**COURSE TEXTBOOK**

“Wastewater Treatment Fundamentals I, Liquid Treatment, 1<sup>st</sup> Edition, Water Environment Federation & Association of Boards of Certification, 2018, ISBN: 978-1-57278-350-8

**SCHEDULE OF ASSIGNMENTS:**

<b>Week</b>	<b>Topics and Reading</b>	<b>Assessments</b>
1	Topic: Intro to WW Treatment Text & Lesson: Chapters 1 Math: Beginning Wastewater Math	Assignments Discussion Quiz
2	Topic: Wastewater Characteristics Text & Lesson: Chapter 2 Math: Beginning Physical/Chemical Math	Assignments Discussion Quiz
3	Topic: Preliminary Treatment Text & Lesson: Chapter 3 Math: Preliminary Treatment	Assignments Discussion Quiz
4	Topic: Primary Treatment Text & Lesson: Chapter 4 Math: Primary Treatment	Assignments Discussion Quiz
5	Topic: Fundamentals of Biological Treatment Text & Lesson: Chapters 5 Math: Secondary Treatment	Assignments Discussion Quiz
6	Topic: Wastewater Treatment Ponds Text & Lesson: Chapter 6 Math: Secondary Treatment – Ponds	Assignments Discussion Quiz
7	Topic: Fixed Film Treatment Text and Lesson: Chapter 7 Math: Secondary Treatment -- Fixed Film	Assignments Discussion Quiz
8	Topic: Activated Sludge	Assignments

	Text & Lesson: Chapter 8 Math: Secondary Treatment – Activated Sludge	Discussion Quiz
9	Topic: Nutrient Removal Text & Lesson: Chapter 9 Math: Nutrient Removal	Assignments Discussion Quiz
10	Topic: Disinfection Text & Lesson: Chapter 10 Math: Disinfection	Assignments Discussion Quiz
11	Final Exam	