

**King Fahd University of Petroleum and Minerals**  
**Civil Engineering Department**  
**CE 546 – Industrial Water and Wastewater Treatment**

**Dr. Muhammad Shariq Vohra**

**Course Outline:**

<u>Topic (Lectures)</u>	<u>Week (Tentative)</u>
<b><i>Introduction (2)</i></b> Introduction Effect of Wastes on Streams Wastewater Treatment Plants	1
<b><i>Organic Waste load on Streams and Stream Sampling (2)</i></b>	2
<b><i>Waste Reduction and Economics of Waste Treatment (2)</i></b>	3
<b><i>Equalization, Neutralization, and Proportioning (2)</i></b>	4
<b>Midterm</b>	<b>5</b>
<b><i>Strategies for the Removal of Industrial Contaminants &amp; Case Studies (11)</i></b> Sedimentation Flotation Air Stripping Biological Treatment Redox Processes Precipitation Advanced Oxidation Processes Adsorption Ion Exchange Membrane Systems	5-10
<b><i>Sludge Treatment and Disposal (4)</i></b>	11-12
<b><i>Field Trip (1)</i></b>	13
<b><i>Joint Treatment of Raw Industrial and Municipal Wastes (2)</i></b>	13-14
<b><i>Treatment Plant Closure (1)</i></b>	14
Presentations	15

**Text:**

Industrial Water Pollution Control by [W. Wesley Eckenfelder](#) (2000)

**WebCT:** Please check out the CE 546 WebCT site for class notes and other related information

**Points-Distribution:**

Midterm	15%
Final	40%
HWs	10%
Term Paper	35%
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	Total: 100%