Water and Wastewater Treatment: Principles and Applications (CIEE 738 / ISMC 211)

Semester Syllabus

Part 1: Course Information

Instructor Information

Instructor: Prof. Wang Zhi Shi
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Course Description

Chemical reactor principles: Mixing continuous and plug flow reactors, chemical reaction kinetics; Physicochemical principles of unit operations of water treatment processes; Biological principles for waste water treatment processes: Activate sludge treatment and biofilm treatment; Urban sewage treatment and disposal.

Prerequisite
None

Course Duration
42 contact hours, 3 hours per week (3-credit course)

Credit: 3

Compulsory/elective course: Elective

Part 2: Course Objectives

1. To introduce to students the principles and application of water and wastewater treatment processes;
2. To develop students with an understanding of the physical and chemical principles for major unit operations in water treatment;
3. To develop the students with the cost-benefit analysis for water and wastewater treatment industry.

Part 3: Major Assessment Methods

Homework:	20%
Middle Term Test:	30%
Written exam:	50%