Environmental Engineering in Wastewater Treatment and Practice

CATHOLIC UNIVERSITY OF KOREA

Course Syllabus

2014학년도 제2학기

Course Title	Korean	폐수처리공학및실습			
	English	Environmental Engineering in Wastewater Treatment and Practice			
Course Number-Division	03961-01	Course Completion Requirement	제1전공선택	Time/Credits	5/3
Day / Time	월8~9(N414), 금 7~9(D706)	Course Target Audience		Prerequisite Courses	
Professor	Full Name	Office	Phone Number	E-MAIL	
	한기봉	D717	02-2164-4878	geebhan@catholic.ac.kr	
Web Site			English Class	A형	

1.Course Outline

Lecture on theory and practicing technical necessity for "Environmental Engineering on Wastewater Treatment and Practice" which deals with topics about the basic theology and applications of sewage and wastewater treatment technology.

2. Objectives

Let the students acquire theoretical knowledge and ability of conducting tasks about wastewater treatment engineering.

3. Teaching Method

lecture in class and laboratory experiment

4. Evaluation Method

midterm(35%) and final exam(35%), laboratory work(report, team project)(20%), attendance(10%)

5. Assignments

reports

6. Experiment, Practical Exercise

1. lab#1: review of korea standard methods for water analysis
2. lab#2: chemical unit operation-coagulation
3. lab#3: reactor hydrodynamics-tracer study
4. lab#4: gas transfer coefficient-KLa
5. lab#5: sludge volume index (SVI) test

7. Related Courses

Introduction to environmental engineering

8. Textbook

Book Title	Publisher	Author	Year	Textbook or not
Wastewater Engineering-treatment/disposal/reuse	McGraw Hill	MetCalf&Eddy		교재
Biological wastewater treatment-Theory and application		Grady&Lim, Dekker.		참고도서

9. Detailed Weekly Activities

Week	Date	Lecture Content	Reference Material	Remarks
1	2014-09-01 ~ 2014-09-07	Introduction of wastewater treatment		
2	2014-09-08 ~ 2014-09-14	Wastewater characteristic		

Week	Date	Lecture Content	Reference Material	Remarks
3	2014-09-15 ~ 2014-09-21	Wastewater treatment objectives,methods, implementation considerations		
4	2014-09-22 ~ 2014-09-28	Physical unit operation I		
5	2014-09-29 ~ 2014-10-05	Physical unit operation II		
6	2014-10-06 ~ 2014-10-12	Chemicla unit operation I		
7	2014-10-13 ~ 2014-10-19	Chemical unit operation II		
8	2014-10-20 ~ 2014-10-26	Midterm exam		
9	2014-10-27 ~ 2014-11-02	Biological unit operation I		
10	2014-11-03 ~ 2014-11-09	Biological unit operation II		
11	2014-11-10 ~ 2014-11-16	Advanced wastewater treatment I		
12	2014-11-17 ~ 2014-11-23	Advanced wastewater treatment II		
13	2014-11-24 ~ 2014-11-30	Wastewater reclamation and reuse I		
14	2014-12-01 ~ 2014-12-07	Wastewater reclamation and reuse II		
15	2014-12-08 ~ 2014-12-14	Disposal of sludge		
16	2014-12-15 ~ 2014-12-21	Final exam		