

2016학년도 2학기 강의정보

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교과목명	하폐수공학및설계2		교강사명		배성준		
학점	3		수강대상 학년		3학년		
교재명	Forth edition – Wastewater Engineering	구 분	주교재	저 자	METCALF & EDDY	출 판 사	McGraw-Hill Education
강의목표	<p>다양한 정보와 지식을 이해하고 문제를 규명하며 분석 · 추론하여 이를 바탕으로 문제 해결에 적용할 수 있다.</p> <p>진로 및 자기계발과 학습전략 활용에 있어 적극적이고 능동적인 태도를 함양할 수 있다.</p>						
교과목 해설	<p>The course covers profound theory and application of biological unit operations for municipal and industrial wastewater treatment. Also includes case study on major treatment systems. Provides practical capability to perform design and operation of biological processes, emphasizing a sense of engineering through developing engineer's ability to think and offering various kinds of related practices.</p> <p>Practical exercises can improve comprehensive problem solving capability and executive ability indispensable to engineers as well as provide professional knowledge. Recommended prerequisites: Biology, Environmental System Engineering, Environmental Fluid Mechanics & Laboratory, Water Chemistry & Laboratory, Environmental Microbiology & Laboratory, Planning, design, & management of water and wastewater system, and Wastewater Engineering & Practice 1.</p>						
강의진행 방법	<p>1. Course description</p> <p>– This course deals with discussion of fundamentals of biological treatment and its application to the design and operation of biological wastewater treatment process, especially focusing on suspended and attached growth biological treatment processes, treatment of biosolids (sludge).</p> <p>Class hours: Wend. 09:00–10:30 (B567), Thur. 10:30–12:00 (A404)</p>						

2. Course Objectives:

- Review the previous course I to recall the fundamental scheme and process for wastewater treatment.
- Introduce fundamentals of biological treatment and understand the mechanisms of biological wastewater treatment.
- Develop the skills to understand, describe, and design the biological wastewater treatment unit processes.
- Improve students' scientific and engineering thinking and communication skills which are needed in the field of environmental engineering.

3. Course Methods:

- Lecture Style
 - * review previous materials
 - * learn new materials
 - * summarize new materials
- Student responsibilities for lecture
 - * help control pace of class by questions
 - * review notes before class to make good use initial review time
 - * be prepared to ask questions about homework assignments in class or immediately after class
- Homework ground rules
 - * purposes are to fully understand the concepts of wastewater engineering and to develop the ability of engineering design for wastewater treatment plant.
 - * discussion is encouraged.
 - * copying is scholastic dishonesty.
 - * homework can be submitted after dead line but there is no assurance that it will be given full credit (- 15% per every week).
- Consultation
 - * best before and after class.
 - * please try to arrange office visit in class or by e-mail or phone.

4. Prerequisite:

Environmental Engineering and Design, Environmental Fluid Dynamics, Water Chemistry and Experiment, Water and Sewage Plan Courses, Wastewater Engineering and Design I.