To contact professor: dolman2000@gmail.com
Phone: 917-502-5784
Office hours: Wednesday 4:00 ~ 6:00 or by appointment

Course Pre-requisites
Students must have strong background on General Chemistry, Fluid Mechanics and Calculus.

Course Description
The main purpose of this course is to develop better understanding on water and wastewater treatment. Prior to mid-term, this course will focus on water treatment process and will focus on wastewater treatment after the mid-term.

Course Objectives
Students are expected to:
• Develop a strong foundation on water and wastewater treatment
• Apply their understanding of the concepts, methods and applications on real situations

Course Structure
The class will be about 13 lectures

Lecture 1: Water Criteria and Effects and introduction of Water and Wastewater Treatment
Lecture 2: Gas Laws and Application
Lecture 3: Reaction rate and Application
Lecture 4: Application of Coagulation and Flocculation
Lecture 5: Application of Sedimentation
Lecture 6: Application of Filtration
Midterm exam
Lecture 7: Introduction of Chemical Unit Processes and Biological Unit Processes
Lecture 8: Water Chemistry and Application
Lecture 9: Application of Aerobic and Anaerobic Process and Design
Lecture 10: Application of Disinfection, Solid Handling and Final Effluent Handling
Lecture 11: Stormwater Management, Design and Regulation
Lecture 12: Application of advanced Water and Wastewater Treatment
Lecture 13: Final Review
Final exam

Readings

The required text for the course is:
Wastewater Engineering Treatment and Reuse (ISBN: 0-07-041878-0)
Final grade

• Homework and lab reports 20%,
Homework problem will be assigned regularly. Assignments to be turned in at the beginning of class on the due date, and late submission are not acceptable. No homework may be submitted after an assignment is returned or after solutions are provided. No homework assignments shall be returned to the students.

• Midterm 35% (To be scheduled)
One two hours midterm exams will be given as noted on the exam schedule below. There midterm exams sheets will be returned to the students for review in class.

• Final 45% (To be scheduled)
A two and half hours final exam will be given as determined by the University Final Exam Schedule (noted on the exam schedule below). Final exams sheets will not be returned, but will remain on file in the instructor’s office for a minimum period time. Makeup exams will be given only if prior permission is granted for extreme situations such as valid medical reasons

• Highest score of the Final exam will be awarded A….good luck!

• Any kinds of dishonorable conduct will be “F”