Department of Civil and Environmental Engineering 26 June 2017
Stanford University
CEE 70 – Environmental Science and Technology (Engr 90 Cross Listed)

Time and Place:	Monday through Thursday 10:30 to 11:20, Y2E2 111
Instructor:	Royal Kopperud royalk@stanford.edu
Teaching Assistants:	James Winter, Annie Yu
Office Hours:	Y2E2, time and location to be announced
Textbook:	Introduction to Environmental Engineering and Science, 3rd Edition, Prentice-Hall 2008, Gilbert M. Masters and Wendell P. Ela. Available at the bookstore and on reserve at the Engineering Library.
Homework:	**20% of Final Grade** Homework sets handed out approximately weekly, due 1 week later. Homework is due before class begins and may be submitted in class or in the drop box at Y2E2 (Yellow Atrium Basement - Shelves). Although you may work together in groups of 2 or 3 to develop your understanding of the homework questions, your submitted homework must be a product of your own effort and must represent your own understanding. **Observe the Honor Code in preparing your homework.**
Exams:	**3 quizzes in class for 80% of Final Grade. 7/13/2017, 8/1/2017, and 8/17/2017. There will be no final exam.**
Announcements:	Canvas course site. You should be automatically added to the site. Be sure to enable immediate notifications for announcements.

Topic Outline (Readings from IEES 3rd Ed.) Lecture Numbers are at the right.

Settling and Stoke's Law
Settling basins
Combined and separate sewer systems

Reverse Osmosis (pp. 314-315 13

Air Pollution (Skim pp. 367-384; 389-393; skim 394-426; 426-428; 437-438; 438-450; 450-458; 483-end of ch.7) .....15 through 19
Criteria Pollutants
Air Quality Index (AQI)
Carbon monoxide
Stokes Law
Atmospheric stability
Ozone
Automobile pollution
Gaussian dispersion
Box model - steady state and transient solutions

Global atmospheric change (Skim pp. 502-512; 512-536; skim 536-545; 545-551; 554-558; 574-587).....20, 21
Energy balance and radiation
IR window
Albedo
Climate sensitivity
Global Warming Potential (GWP)
Stabilization wedges
Chlorine and stratospheric ozone