CEE-PSC 5620
Aquatic Chemistry
Spring Semester 2020

Instructor: William J. Doucette
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Lecture: (ENGR 201): 3:00-4:15 PM (T, TH)
Office hours: 4:15-5:15 PM (T, TH) or by appt.

Course Goals and Objectives: This course is designed to provide students with an understanding of the principles of aquatic chemistry with emphasis on chemical equilibria, carbonate system, acid-base reactions, complex formation, oxidation-reduction reactions, and dissolution chemistry.

Prerequisites by Topic: General chemistry

Topic	# of lectures (Total 25)	Reading*
Introduction	1	
Conservation Principles, Chemical Equilibrium & Kinetics	5	1-156
Acid-Base Chemistry (carbonate system)	5	157-235
Computer Equilibrium Models (MINEQL)	2	Handouts
Solid Dissolution and Precipitation	3	236-318
Complexation	3	319-420
Oxidation-reduction	2	421-508
Sorption	2	509-570
Fate of organic chemicals in aquatic environments	2	Handouts

Suggested text and readings:

*Morel, F.M.M. and J.G. Hering. 1993. *Principles and Applications of Aquatic Chemistry*. John Wiley & Sons, Inc., New York, New York. 588 pp.
Stumm and Morgan. 1996. *Aquatic Chemistry. Chemical Equilibria and Rates in Natural Waters 3rd Ed. Wiley-Interscience*. New York. 1021pp.

Grading policy:

Quizzes/homework	60%*
Exam 1	20%
Exam 2	20%
TOTAL	100%

***Late homework worth a maximum of 50%**

Grading:

A = 100-90%
B = 89-80%
C = 79-70%
D = 69-60%

Dates of interest: Last day of class (4/21). Final exam (4/23), (3:00 PM-4:50 PM).