



## Syllabus

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### Syllabus Spring 2016

“To waste, to destroy our natural resources, to skin and exhaust the land instead of using it so as to increase its usefulness, will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified and developed.”

President Teddy Roosevelt, 1907

## Tentative Syllabus Chemistry 3368 Environmental Chemistry

### Spring 2016

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**Office hours** 8:00-9am and 10-11am MWF; Noon-1pm Monday and Wednesday; or by appointment anytime.

Text: **Environmental Chemistry**, 5<sup>th</sup> Edition by Baird and Cann (Freeman, 2012). ISBN:978-1-4292-7704-4

The material in the course includes the following material in your text:

- Introduction to Environmental Chemistry
- Chapter 1: Stratospheric Chemistry (13.75-23.25; 25.8-30.2)
- Chapter 2: The Ozone Holes (37-52.25; 53.3-59.99)
- Chapter 3: The Chemistry of Ground-Level Air Pollution (69-94.75; 118-122.8; 126-end)

- Chapter 5: The Greenhouse Effect (165-196.75; **Box 5-2** p.190; 202-210.75)
- Chapter 6: Energy Use, Fossil Fuel Energy, and CO<sub>2</sub> Emissions (223-234.9; **Box 6-3** p.242; 252-267; **Box 6-4** p.265.)
- Chapter 7: Biofuels and other Alternative Fuels (291-312)
- Chapter 13: Pesticides (580-587.6; 589-594.5; 610.8-616; **Box 13-1** p.611)
- Chapter 14: Dioans, PCBs, et al. (623-637; 653.3-659)
- Chapter 9: Radioactivity, Radon, and Nuclear Energy (373-end)
- Chapter 12: Toxic Heavy Metals (519-543.85; 546.7-565.4; 566.8-end)
- Chapter 11: The Pollution and Purification of Water (491-end)

The test dates are all on Fridays (you're welcome):

- **Test 1 February 5,**
- Test 2, March 4,
- Test 3, April 8,
- The Final Exam will be 2 hours long and has been scheduled for Wednesday May 4, noon to 2 PM, 2016.



## Course Grading

(The scheduled test dates are not negotiable but may be changed by the instructor.)

The grades in this class will be assigned in the following way:

greater than 89.5% = final grade of A

79.5 to 89.5 B

69.5 to 79.5 C

59.5 to 69.5 D

less then 59.5 F

Three 80 minute tests = 65%

Home work postings = 15%

The final = 20%

Excessive absences, tardiness, or leaving early will adversely affect your grade in the course. Your course grade may be lowered with more than two unexcused absences.



## Course Description

**CHM 3368 ENVIRONMENTAL CHEMISTRY.** The chemical principles underlying the effects of air, water, and soil pollution are covered. Specific attention is paid to gas phase radical reactions, light absorption characteristics of atmospheric components, solution chemistry of fresh and salt water systems, and the mobility and chemistry of metal components of soil systems. Prerequisites: A minimum grade of C in CHM, 2401, 2323 and 2325 (or concurrent enrollment in CHM 2325). Spring. Credit 3.



## Required Calculator

To limit the use of memory-intensive calculators that can store text, formulae, and chemical nomenclature, you are required to use a Texas Instruments TI30 model calculator in this course during in class tests. There are multiple different TI30 models and all of them will work but I suggest the TI30Xa. Other calculators like TI Models TI34 and TI36 don't meet this requirement.



## Purpose of this course

The purpose of this 3 semester hour chemistry course is to provide a broad introduction to the chemistry of the environment, specifically centering on the atmosphere, the aquasphere, and the pedosphere.



## Attendance Policy

**Attendance is required.** Since this is a MWF class, three unexcused absences per semester are allowed. Any tests missed because of unexcused absences will result in a grade of zero for that test. Excused absences include medical problems (with documentation from a doctor), death in the family, excused absences while conducting official Sam Houston State University business, or absences approved by the instructor before the time of the absence. Beginning with the fourth unexcused absence, the instructor reserves the right to lower the student's final course grade. Tardiness, or leaving class early can also adversely affect your grade in the course. Information that the student needs to use to provide information to determine whether an absence is excused or not (doctor's excuse etc.) must be presented to the instructor within one week after the absence.



## Homework posts

There are two homework assignments per test (four in the course). Each

homework assignments consist of two parts: A) an initial post of a completely worked out homework problem from the assignment list made available to the class in the Blackboard Homework Forum and B) a check of some else's homework post.

You will post two homework problems and two checks before the deadline before each test in order for the class to have a complete, correct set of worked out homework problems available before each test.

More detailed instructions for the homework postings are included with in homework forum.



### **On-line Assignments**

Note that the Blackboard server is routinely backed up in the middle of the night. When this occurs, Blackboard will not be available to you for as long as 1.5 hours. The time of the backup is somewhere around 3 am but may change. Before you arrange your schedule to routinely complete your online assignments in these wee hours, e-mail the SHSU help desk (helpdesk@shsu.edu) and ask them specifically "At what time is the Blackboard server NOT AVAILABLE because of maintenance or backup procedures?" then make your plans accordingly.



### **Course drop date**

The university-mandated drop dates for this course can be found here:

[http://www.shsu.edu/~reg\\_www/academic\\_calendar/](http://www.shsu.edu/~reg_www/academic_calendar/)

Look for the calendar entry that says: "Last day to drop a spring course or lab with a Q."

Students will not be permitted to Q drop after this deadline without documentable extenuating circumstances such as illness or a death in the immediate family.



### **Additional Syllabus Material**

Additional very important syllabus material is here.

The material in this link is also part of the course syllabus.



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