Chemistry in the Modern World

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So what is this course going to be about? The idea of this course is to teach you some chemistry and learn about the origins of some of the societal issues that we are facing now. The text book covers a wide range of topics, but we will cover only part of it this term. The chapters and the order we will cover them in are given below. I can’t give you a schedule for what chapter will be covered on a given day, but we will stick with the order given below, so regular class attendance will make what is being covered next obvious. As in all of your classes, you should read the material ahead of me. Reading it, hearing it, then reading again is the best way to learn it. Chemistry has the added advantage of having problems to work through to cement the concepts in place.

Chapter 1: *The Air We Breath*  
Chapter 2: *Protecting the Ozone Layer*  
Chapter 3: *The Chemistry of Global Warming*  
Chapter 4: *Energy, Chemistry and Society*  
Chapter 5: *The Water We Drink*  
Chapter 8: *Energy from Electron Transfer*  
Chapter 7: *The Fires of Nuclear Fission*

Resources: You can get to the course web page through the Chemistry Department web page. There are a number of items there including grades and other things that are specific to this
course. My lecture notes are available on the web page in the “Resources” section. This part of the page is password protected. The username is “student” and the password is “Sc21”. I will be lecturing from Powerpoint so having a copy of the notes in front of you to take notes onto may be a good idea.

**Homework:** Problems will be assigned each Thursday. The homework will not be collected or graded, but you should work through all of the problems prior to the following Thursday.

**Pop-quizzes:** There will be a surprise pop-quiz at the beginning of class every Tuesday. We will spend no more than ten minutes on these quizzes and they will be lifted directly from the homework. Thus doing the homework will be important to get you full credit on the quizzes. We will drop your lowest quiz score.

**Exams:** There will be three, one hour exams. These will be given in the lab periods in the 5th, 9th and 13th weeks (calendar is attached to this syllabus).

**Laboratory:** We will do seven experiments over the course of the semester. The experiments are described in your laboratory guide/textbook. The schedule of which experiments will be done on each week is given in the attached schedule.

There are several things you need know about the laboratory:
1. Put on your safety glasses. You will not be allowed in the laboratory without safety glasses on. You must wear them the entire time you are in the lab, no matter what you are doing. There are no exceptions to this rule. If you don’t have them you will be sent out of the lab and will not be able to receive credit for that experiment.
2. Read the experiment before you come to class. The lab periods are two hours long and you will not have time to finish it if you read it for the first time during the lab period. There are questions that you will be asked to answer at the end of each experiment. Reading them ahead of time will keep them fresh in your mind while you are working and make them easier to answer later.
3. You need to purchase a spiral notebook to use for recording notes and observations in the lab. This will be used through the semester as your laboratory notebook.
4. You should make a photocopy of the experiment and bring it with you to the laboratory, since you will need to enter data directly into some of the pages in the manual.
5. A lab report is due one week after each experiment. If it is turned in late, we will grade it and then deduct 10% of the points for each calendar day it is late.

**Grading:**

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>10%</td>
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<tr>
<td>Hour exams</td>
<td>40%</td>
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<tr>
<td>Laboratory</td>
<td>25%</td>
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<tr>
<td>Final exam</td>
<td>25%</td>
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<tr>
<td><em>Total</em></td>
<td>100%</td>
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