

CH171-Life Science Chemistry I  
Fall 2009

Instructor: Dr. Rosemary White email: rosew@bu.edu

Office Hours: M 12:00-1:00 pm SCI 512  
T 5:00-6:00 pm SCI 512  
W 11:00 am- 12:00 pm SCI 512

Course Description: One-semester introduction to general chemistry including atomic structure, chemical bonds, stoichiometry, properties of gases, molecular interactions, solutions, chemical reactions, acids/bases, buffers, and radiation.

Required Text: *An Introduction to General Chemistry: Connect Chemistry in your Life* — Ira Blei and George Odian

Website: [http://courseinfo.bu.edu/courses/09fallcasch171\\_a1/](http://courseinfo.bu.edu/courses/09fallcasch171_a1/)  
Handouts and information will be posted on the website.

Lecture: MWF 10:00-11:00 am KCB 101  
Pre-lab lecture: M 3:00-4:00 pm MOR 101

Laboratory: T 9:30 am-12:30 pm SCI 346/348  
R 9:30 am- 12:30 pm SCI 346/348  
F 11:00 am- 2:00 pm SCI 348  
F 2:00-5:00 pm SCI 346/348

Discussion: M 6:00-7:00 pm PRB 146  
M 7:00-8:00 pm SCI 111  
T 9:30-10:30 am SCI 113  
T 11:00 am-12:00 pm SOC B59  
R 9:30-10:30 am SCI 113  
R 11:00 am-12:00 pm SOC B59  
W 4:00-5:00 pm PSY B55

Grading: Exam 1 – Oct. 2 11%  
Exam 2 – Oct. 30 11%  
Exam 3 – Dec. 4 11%  
Quizzes (4) 12%  
Final Exam – Dec. 21 25%  
Laboratory Portion 30%

Attendance: Although attendance will not be recorded, students are expected to be present for all lectures. Any assigned readings or material presented in lectures may appear on exams or quizzes.

Practice Problems: Approx. 20 end-of-chapter practice problems will be assigned for each chapter, but they will not be collected or graded. However, these problems should be worked in preparation for quizzes/exams. Answers to in-chapter problems and odd-numbered end-of-chapter exercises are provided in the appendix of the text.

Quizzes: Four quizzes will be given throughout the semester during discussion section. If you have a planned *excused* absence (religious observance, BU athletic team trip, etc.), you must provide your TF with a written request **at least one week in advance**, and arrangements to make-up the quiz will be made. No make-up quizzes will be given for unexcused absences.

|                |        |                    |
|----------------|--------|--------------------|
| Quiz Schedule: | Quiz 1 | Week of Sept 14-18 |
|                | Quiz 2 | Week of Sept 21-25 |
|                | Quiz 3 | Week of Oct 19-23  |
|                | Quiz 4 | Week of Nov 16-20  |

Discussion: Answers to practice problems will be covered during discussion section. If a discussion is cancelled due to a school holiday, you may attend another discussion during that week. Otherwise, you must attend the discussion section you are registered for. Graded exams will be returned during discussion following the week of the exam.

Exams: Exams 1, 2, and 3 are administered during regular lecture periods (**Friday, Oct. 2; Friday, Oct. 30; Friday, Dec. 4**). If you have a planned *excused* absence, you must provide Dr. White with a written request **at least one week in advance**, and a make-up exam will be arranged. **Unexcused absences will result in a zero for the exam.** All requests for exam regrades must be submitted to Dr. White within one week of when the materials are returned to the students.

Final Exam: The final exam is scheduled for Monday, Dec. 21 9:00-11:00 am. **The final exam is cumulative and cannot be made-up or excused.**

Academic Conduct Code: It is the responsibility of every student in the College of Arts and Sciences to be aware of the Academic Conduct Code's contents and to abide by its provisions. By attending this class, it is assumed that you have read and will abide by the Code:  
<http://www.bu.edu/cas/academics/programs/conductcode.html>

**Tentative Schedule of Lecture Topics**

| <b>LECTURE #</b> | <b>DATE</b> | <b>TOPIC</b>                 | <b>CHAPTER</b> |
|------------------|-------------|------------------------------|----------------|
| 1                | W, 9/2      | Language of Chemistry        | 1              |
| 2                | F, 9/4      |                              |                |
|                  | M, 9/7      | NO CLASS                     | LABOR DAY      |
| 3                | W, 9/9      | Language of Chemistry        | 1              |
| 4                | F, 9/11     |                              |                |
| 5                | M, 9/14     | Atomic Structure             | 2              |
| 6                | W, 9/16     |                              |                |
| 7                | F, 9/18     |                              |                |
| 8                | M, 9/21     | Molecules and Chemical Bonds | 3              |
| 9                | W, 9/23     |                              |                |
| 10               | F, 9/25     |                              |                |
| 11               | M, 9/28     | Chemical Calculations        | 4              |
| 12               | W, 9/30     |                              |                |
| <b>F, 10/2</b>   |             | <b>EXAM #1</b>               |                |
| 13               | M, 10/5     | Chemical Calculations        | 4              |
| 14               | W, 10/7     | Physical Properties of Gases | 5              |
| 15               | F, 10/9     |                              |                |
|                  | M, 10/12    | NO CLASS                     | COLUMBUS DAY   |
| 16               | T, 10/13    | Physical Properties of Gases | 5              |
| 17               | W, 10/14    | Molecular Interactions       | 6              |
| 18               | F, 10/16    |                              |                |
| 19               | M, 10/19    |                              |                |
| 20               | W, 10/21    | Solutions                    | 7              |
| 21               | F, 10/23    |                              |                |
| 22               | M, 10/26    |                              |                |
| 23               | W, 10/28    | Chemical Reactions           | 8              |
| <b>F, 10/30</b>  |             | <b>EXAM #2</b>               |                |
| 24               | M, 11/2     | Chemical Reactions           | 8              |
| 25               | W, 11/4     | Acids, Bases, Buffers        | 9              |
| 26               | F, 11/6     |                              |                |
| 27               | M, 11/9     |                              |                |
|                  | W, 11/11    | NO CLASS                     | VETERANS' DAY  |
| 28               | F, 11/13    | Effects of Radiation         | 10             |
| 29               | M, 11/16    |                              |                |
| 30               | W, 11/18    |                              |                |
| 31               | F, 11/20    | Saturated Hydrocarbons       | 11             |
| 32               | M, 11/23    |                              |                |

| <b>LECTURE #</b>              | <b>DATE</b> | <b>TOPIC</b>             | <b>CHAPTER</b> |
|-------------------------------|-------------|--------------------------|----------------|
|                               | W, 11/25    | NO CLASS                 | THANKSGIVING   |
|                               | F, 11/27    | NO CLASS                 | THANKSGIVING   |
| 33                            | M, 11/30    | Saturated Hydrocarbons   | 11             |
| 34                            | W, 12/2     | Unsaturated Hydrocarbons | 12             |
| <b>F, 12/4</b>                |             | <b>EXAM #3</b>           |                |
| 35                            | M, 12/7     | Unsaturated Hydrocarbons | 12             |
| 36                            | W, 12/9     |                          |                |
| 37                            | F, 12/11    | Final Review             |                |
| <b>M 12/21, 9:00-11:00 am</b> |             | <b>FINAL EXAM</b>        |                |

### End-of-Chapter Practice Problems

| <b>LECTURE #</b> | <b>CHAPTER</b>                          | <b>PROBLEMS</b>  |
|------------------|---|--|
| 1-4              | Chap 1: Language of Chemistry           | 1, 3, 9, 11, 13, 15, 17, 19, 21, 23, 25, 29, 31, 33, 39, 41, 47, 49, 51, 55  |
| 5-7              | Chapter 2: Atomic Structure             | 3, 5, 15, 17, 21, 23, 27, 29, 35, 39, 41, 43, 45, 47, 49, 53, 57, 61, 73, 75 |
| 8-10             | Chapter 3: Molecules and Chemical Bonds |  |
| 11-13            | Chapter 4: Chemical Calculations        |  |
| 14-16            | Chapter 5: Physical Properties of Gases |  |
| 17-19            | Chapter 6: Molecular Interactions       |  |
| 20-22            | Chapter 7: Solutions                    |  |
| 23-24            | Chapter 8: Chemical Reactions           |  |
| 25-27            | Chapter 9: Acids, Bases, Buffers        |  |
| 28-30            | Chapter 10: Effects of Radiation        |  |
| 31-33            | Chapter 11: Saturated Hydrocarbons      |  |
| 34-36            | Chapter 12: Unsaturated Hydrocarbons    |  |