Advanced Placement General Chemistry

CH 107 01 A & B, 1:00, MTWRF, GH 348
CH107LAA, 2:00 - 5:00, M, GH364
CH107LBB, 2:00 - 5:00, T, GH364

Professor Joseph L. Kirsch, Ph.D.
Office - GH 347
Phone - 940 9400
E-Mail - Kirsch@butler.edu

Text and Other Resource Material

Chemistry & Chemical Reactivity by Kotz & Treichel
Solutions to Exercises in Chemistry & Chemical Reactivity by Banks
Study Guide to Chemistry & Chemical Reactivity by Hunter
Interactive General Chemistry CD Rom by Kotz and Vining
AP Supplements by Kirsch
AP Laboratory Experiments by Kirsch, Pribush, & Ciszewski

Support Materials

Laboratory Notebook– Wait on purchase until we discuss in class!
Safety Goggles, Impact /Chemical Splash
Available from Chemistry Department Stockroom

Laboratory Handbook for General Chemistry (Optional) by Giswald, Etal.
Grading System

- Hourly Exams (3 @ 100 pts each) 300 pts
- Mini Papers (5 @ 20 pts each) 100 pts
- 1 Final Exam 100 pts
- Laboratory 100 pts

Total Points 600 pts

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<thead>
<tr>
<th>Total Pts</th>
<th>Percent</th>
<th>Grade</th>
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<tbody>
<tr>
<td>600 pts - 540 pts</td>
<td>100% - 90%</td>
<td>A</td>
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<tr>
<td>539 pts - 522 pts</td>
<td>89.9% - 87%</td>
<td>A-</td>
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<tr>
<td>521 pts - 510 pts</td>
<td>86.9% - 85%</td>
<td>B+</td>
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<tr>
<td>509 pts - 474 pts</td>
<td>84.9% - 79%</td>
<td>B</td>
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<tr>
<td>473 pts - 462 pts</td>
<td>78.9% - 77%</td>
<td>B-</td>
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<tr>
<td>461 pts - 450 pts</td>
<td>76.9% - 75%</td>
<td>C+</td>
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<td>449 pts - 414 pts</td>
<td>74.9% - 69%</td>
<td>C</td>
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<tr>
<td>413 pts - 402 pts</td>
<td>68.9% - 67%</td>
<td>C-</td>
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<tr>
<td>401 pts - 384 pts</td>
<td>65.9% - 64%</td>
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<tr>
<td>483 pts - 348 pts</td>
<td>63.9% - 58%</td>
<td>D</td>
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<tr>
<td>less than 348 pts</td>
<td>&lt; 58%</td>
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Exam and Paper Dates

- Paper #1 (Due) September 8
- Exam #1 September 22
- Paper #2 (Due) September 29
- Reading Break October 12-13
- Paper #3 (Due) October 20
- Exam #2 October 27
- Paper #4 (Due) November 17
- Exam #3 December 1
- Paper #5 (Due) December 8
- Final Exam December 13 (1:00 - 4:00)
Study Methods

Learning is an extremely personal and individualized experience. A method of study that works for one person may not be the best method for another person. Clearly, each person has their own learning style. There are, however, a couple guiding principles that are common to all good study processes. The following suggested method of study includes these principles.

1. Be prepared for class and make class time a real learning experience.

   Prior to chapter material being covered in class lecture, leaf through the chapter examining the topics to be covered. Read the chapter completely. Examine the figures, tables, pictures, and example problems. If there is material that is difficult for you to understand in the chapter, you will now be aware of it, and you can concentrate and be prepared to ask question on the difficult material when it is covered in class lecture. Attend all classes! Come to class rested with an alert mind. Take good lecture notes and ask questions if necessary. Make class time a maximum learning time. If you feel that you are having trouble seek extra help from the professor.

2. Keep up and study each day.

   Read through and study all of your lecture notes each day. After material has been covered in class, reread the chapter and work through the example problems. Often a problem which addresses an important concept to be covered in the next class will be assigned in class for completion before the next class period. Make sure that the problem has been attempted before the next class period. Work the assigned problems at the end of the chapters and check the solution methods in the solution manual. The purpose of working the problems is not just to get the answer; it is to learn the method of solving the problem and to learn the chemical concepts associated with the problem. In addition to learning chemical concepts and problem solving, it will also be necessary to learn some descriptive chemistry. This means learning the names, symbols and formulas for some of the common elements and compounds.
Mini Papers

About every three weeks you will be required to read an article from the popular science literature (American Scientist, Journal of Chemical Education, Discover, Science, Scientific American, Science News, New York Times, etc.) that is related to chemistry and to write a mini paper on the article. A list of the popular science literature sources that are available in the Butler Library is given below. You are not restricted to these literature sources as long as the article should come from a quality science literature source. For some of the paper assignments, the choice of literature sources will be assigned.

The mini paper should be approximately three to four pages, typed or WP, neatly done, and well written. In a mini paper each sentence is important since there are fewer sentences that make up the paper. Try to be efficient in your wording. Of course, a paper is best written as a draft and then rewritten after some digestion time. This last issue suggests that you should not wait until the last minute to do the work. Papers will not normally be accepted beyond three days of the due date. Unless approved by the instructor, the article should have appeared in print from June 2000 to present. The mini paper should include the following basic parts:

Part 1 - Reference (top of the first page): Article Title, Literature Source Title, Author(s) Name(s), Volume and Number (if appropriate), Page Numbers, and Date. See the following example:


Part 2 - Give a short critique of the article (approx. two pages). Describe the major focus of or issues in the article. What are the major points of the article?

Part 3 - Talk back to the article, the author(s), and the issues (approx. one page) This is your chance to be creative and interact with the article. Clearly, this section depends on the nature of the article. This section could include such things as:

1) Relating the major issues of the article to material covered in class.
2) A discussion of the relevant societal issues in the article - cost vs benefits. Cost may not necessarily mean the cost of an item in dollars, but the impact on society or the environment.
3) If you could have a conversation with the author, what questions would you ask and opinions would you give.
4) If you were to do further work in this area what other information would you need. It is not necessary to find the information for this paper, but describe what it would be and where you might find it.
5) If the article describes a new product or technology, perhaps an evaluation of the merits in terms of a cost/benefit to society.
If you find material (chemical names, concepts, etc.) in the article that needs further clarification in your mind, the following are potential references:

Molecules by Atkins (Reserved at the Desk in the Science Library)

Chemistry in the Market Place by Ben Selinger (Reserved at the Desk in the Science Library)

The Merk Index - Science Library

Encyclopedia of Chemistry - Ref QD4.V37

Dictionary of Organic Compounds - Ref QD 251.D49

Encyclopedia of Science and Technology - Ref Q 123. E497

McGraw Hill Encyclopedia of Science and Technology - Ref Q 121.M312

Your Text books

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Selected general science journal titles from the
Butler University Science Library

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<tr>
<th>American Scientist</th>
<th>Environment</th>
<th>Sea Frontiers</th>
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<td>Animals Agenda</td>
<td>FDA Consumer</td>
<td>Sky and Telescope</td>
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<td>Astronomy</td>
<td>Issues in Science</td>
<td>Smithsonian</td>
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<td>Audubon</td>
<td>and Technology</td>
<td>Technology Review</td>
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<td>Aviation Week and Space Technology</td>
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<td>BioScience</td>
<td>Journal of Chemical Education</td>
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<td>Chemical and Engineering News</td>
<td>Natural History</td>
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<td>Chemical Week</td>
<td>New Scientist</td>
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<td>Chemtech</td>
<td>Omni</td>
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<td>Physics Teacher</td>
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<td>Discover</td>
<td>Popular Science</td>
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<td>EPA Journal</td>
<td>Research and Exploration</td>
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<td>Environmental Science and Technology</td>
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<td>Scientific American</td>
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**Student Disability**

It is the policy and practice of Butler University to make reasonable accommodations for students with properly documented disabilities. Written notification from Student Disability Services is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me and allow two weeks notice. Otherwise, it is not guaranteed that the accommodation can be received on a timely basis. If you have questions about Student Disability Services, you may wish to contact Michele Atterson, JH 136, ext. 9308.

**HEALTH HAZARDS AND THE LABORATORY**

In our courses, laboratory attendance is a fundamental component to the understanding of concepts and techniques of performing chemistry. Additionally, the very nature of laboratory involves using chemical reagents, which can pose potential health risks. If you have concerns about your health, please have a discussion with your professor or any chemistry faculty member. Such concerns might include, but are not limited to: any condition that results in an immuno-deficiency; persons considering conception; certain heart conditions; serious allergies; etc. Understand that any information shared will be kept entirely confidential. DO NOT HESITATE TO DISCUSS THIS WITH A CHEMISTRY FACULTY MEMBER AND/OR MICHELE ATTERSON (JH 136, x9308).

Michele Atterson, M.A.
Director of Student Disability Services
Butler University
4600 Sunset Avenue
Indianapolis, Indiana 46208
1-317-940-9308 (V/TT)
1-317-940-8226 FAX
matterso@butler.edu