

Dr. Robert K. Wismer **Chemistry! “Better Things for Better Living”** CHEM 101, Fall 2009
Robert.Wisner@Millersville.edu 214 Caputo, 872-3661 MTWRF 9:30-10:30 & by appt.

Text: *Chem Lite*, Robert K. Wismer, Millersville University, 2009, plus additional handed-out notes, \$10.00 maximum

Tentative Schedule for First Half of Semester (boldface Chapter numbers.) **1A.** Getting Started

1b. Measuring **2.** Atoms and Ions **3.** Molecules & Compounds **4.** Chemical Reactions **5.** Organic Chemistry

6. Solutions Consult the calendar on the back of this syllabus for dates of chapter coverage and quizzes.

Quizzes: There is a 20-point quiz every other class meeting, starting the 2nd Tuesday of the semester, even if a quiz is not announced in class. Note quiz dates on the calendar on the back of this syllabus. (Deviations from this schedule will be conveyed to you in writing, or via marauder e-mail.) Each quiz covers all of the material discussed in class (with emphasis on that since the last quiz), all sections of the text that have been touched on or mentioned in class, and supplemental readings (see below) corresponding to class discussions. There is a sample first quiz at the end of this syllabus. A week after Fall Break there is a 50-point double quiz, with the same type of questions, so that you gain practice in reviewing.

Second Part of Semester Before Fall Break, you will vote on the topics for the rest of the course that you wish to study. Each student may select five topics. We will study the topics that receive the most votes.

Final: The final covers the entire semester and contains questions from the quizzes **plus** questions submitted by you. You may submit questions for the final examination on or before the beginning of class on Tuesday 25 November. Late questions are not accepted. The next Tuesday, you will receive a complete list of all acceptable questions submitted by your fellow students. To be acceptable, a question must (1) be on time, (2) be legibly printed on one side of a 3 × 5 card, (3) have the correct answer legibly printed on the other side, (4) be the same type and of about the same level of complexity as quiz questions, and (5) not be a duplicate. In the case of duplicate questions, the first version submitted is accepted. Only submit one question each class period. For each of four accepted questions, you will receive ten [10] bonus points.

Having Trouble? Make sure you memorize items you have been told to before the next class. Write as you read: a three-line summary of each page of text and of your notes, a question for the final, a question about what you don't understand. Writing keeps your mind from wandering and compels you to understand what you have read.

Current Chemistry: Earn up to 20 more bonus points. Report one chemistry-related news article: (1) written—and about a news incident occurring—within 30 days before your report, (2) from popular press (examples: New York Times, Newsweek, *not* Science Digest) and (3) for general public (not specialized readers like firefighters, dietitians, etc.). Ask to be sure article wasn't used; only one student receives credit for each. E-mail (to robert.wisner@millersville.edu) your report (no attachments) containing (1) your name, (2) URL to article's **full** text, (3) article summary, and (4) explanation of how CHEM101 helped you understand the article. Points earned based on: grammar, how well you connect to CHEM101, and summary's quality. Article's full text or quotes there-from is no summary. Report must be 125 to 175 words. You earn **zero** bonus points with no opportunity to resubmit if you do not follow this paragraph's requirements. Report due before 1:00 p.m. on Friday before Thanksgiving. Submit early; avoid disappointment. Score e-mailed in one week.

Course Notes: A new book for this course is in preparation. Its first six chapters are the reading for the beginning of the course. Beyond the first six chapters, each chapter/topic's notes are available in-class on a quiz day, for free. If you do not pick up a copy when it is available, or if you lose your copy, copies are available from Dr. Wismer's office (during office hours) for \$1.00 per chapter; no change is provided. **Supplemental** To expose you to current material, supplemental reading will be assigned, usually from the web. The URL of a supplemental reading will be e-mailed to your marauder address a week or more before questions about that reading appear on a quiz; expect a supplemental question on each quiz.

Absences: You are responsible for obtaining notes from a classmate for a missed class, whether excused absence or not. You must arrange to make up any missed work. Absences may be excused for university-sponsored events, jury duty, military duty, death or critical illness in immediate family, or personal illness. Support each excuse request with a written statement of the absence's reason, signed by the responsible person (coach, faculty member, judge, commander, physician), including their phone number. Death or illness requests presented more than one week after returning to classes are **invalid**. Other excuse requests **must** be presented **before** the absence's date. Personal illness excuse is valid **only** if a physician states you were too ill to come to class. Doctor's appointments & medical tests are **not** excused absences. Do not expect to miss more than four classes for any reason and still pass the course. (In the course are enough extra credit points to make up for an unexcused absence.) Excused quiz points after the first twenty are made up at the time of the final, with questions on the entire course.

Course Twelve quizzes (20 points each) 240 points A = 90% 360 points plus/minus

Grad- Double quiz 50 points B = 80% 320 points + is _7_, _8_, _9_

ing: Questions for final (optional) 40 points C = 70% 280 points - is _0_, _1_, _2_

Final examination 110 points D = 60% 240 points There's no A+

TOTAL 400 points F < 60% <240 points

To anticipate your course grade, remember there are no bonus points on the final. So, suppose a student has a C before the final, 75% of 290 points = 218 points: 45 bonus points plus 173 quiz points. (That's $173/290 = 60\%$ on quizzes.) If s/he does the same on the final as on the quizzes, that's $(110 \times 0.60 =) 66$ points on the final giving a course total of $(218 + 66) / 400 = 71\%$, a C-. Often, unfortunately, final exam grade is lower than quiz grades; some students don't study for the final. Because

of privacy laws, I cannot convey your grade via internet or over the phone. You may stop by during office hours, or simply add up all the points you have earned and divide by the total points possible on the quizzes.

Course Policies:

If you have an objection to any aspect of the course, please communicate it (anonymously or otherwise) to the instructor. Because of "academic freedom," neither department chair nor dean can do as much to help.

Plagiarism: You have plagiarized when you submit someone else's work as your own. University policy stipulates that a penalty for plagiarism becomes part of your official record. Penalties range from zero on the copied work to "F" for the course. We may report both parties (the copier and the one copied from), since we cannot tell which one copied.

Cancelled Classes: "The cancellation of classes by the University does not alter the mutual responsibility of faculty and students to fulfill the requirements of the curriculum." [Faculty Senate 29 Oct 2001] In the event that classes are cancelled, we shall agree as a class on means to make sure that the content of the course is not compromised.

Chemistry 101

23 April 2009 version

Fall 2009 Tentative Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
31	1 1a Getting Started	2	3 1a Getting Started	4 end drop
7 LABOR DAY HOLIDAY!	8 1b Measuring qz start W period	9 last add	10 1b Measuring	11
14	15 2. Atoms Ions qz	16	17 2. Atoms & Ions	18
21	22 3. Molec Cmpds qz	23	24 3. Molec & Cmpds	25
28	29 3. Molec Cmpds qz	30	1 4. Chem Rxns	2
5	6 4. Chem Rxns qz	7	8 4. Chem Rxns	9
12 FALL	13 BREAK	14	15 5. Organic qz	16
19	20 5. Organic	21	22 Double Quiz	23
26	27 6. Organic	28	29 6. Solutions qz	30
2	3 6. Solutions	4	5 6. Solutions qz	6 end W period
9	10	11	12 quiz	13
16	17	18	19 quiz	20
23	24	25 THANKS-	26 GIVING	27 BREAK
30	1 quiz	2	3	4
7	8 quiz	9	10	11
14	15 2:45 for 8 a.m. 8:00 for 11 a.m.	16 R E S T R U C T U R E D	17 W E E K	18

Objectives: At the conclusion of this course, you should have been able to do the following.

1. Know what chemistry is, what it can do and what it cannot do.
2. Know how atoms of elements combine and rearrange to form compounds.
3. Understand how different elements may behave differently and similarly.
4. Predict the products of simple chemical reactions.
5. Use the mole concept to predict how much product will form.
6. Describe simple reactions between carbon-containing compounds.
7. Describe how reactions occur in aqueous solutions, especially ionic rearrangements.
8. Be able to suggest possible discrepancies and errors in popular reports of scientific events.

First Quiz (Sample)

1. _____ is a non-financial reason to NOT dredge the Hudson River bottom to remove PCBs.
2. _____ is what the written excuse from a health professional must state in order for you to be excused from a CHEM 101 quiz.
3. _____ is why carbon is an important element.
4. _____ is the symbol for the element potassium.
5. _____ is the name of the element whose symbol is Ca.
6. _____ is the type of organism that needs sodium in addition to potassium.
7. _____ is the name or symbol of an element present in hydrocarbons.
8. _____ was how silver nitrate (one of the two clear solutions I mixed) was used for infants.
9. _____ is a property that you observed in class that differs from hydrogen to helium.
10. _____ is the difference between a "scientific" and a "legislative" law.
11. _____ is the important difference between science and a belief system.
13. _____ is a homogeneous mixture.
12. _____ is the (important) way that a compound differs from a homogeneous mixture (a solution).
14. _____ was the last of the three common states of matter to be discovered.