CHEMISTRY 103
SUMMER 2015

Lecturer:	**Dr. Paul Hooker**
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E-mail:	phooker@wisc.edu
Office Hours:	M/W/F 11:45 am–12:45 pm and By Appt
Lectures:	M/W/F 8:55-10:10 am, Room 1361
Labs:	T/Th 8:55-11:55 am, Room 1335
Discussion:	301 M/W/F 10:20-11:55 am Room 2377 302 M/W/F 10:20-11:55 am Room 2381
Course Website on Learn@UW:	https://learnuw.wisc.edu/
General Chemistry Homepage:	http://genchem.chem.wisc.edu/
General Chemistry Office:	Room 1328 Chemistry 263-2424
Important Dates:	Deadline for 100% Refund: 6/19/2015 Final Drop Date: 7/3/2015

INTRODUCTION

This course is the first part of a two semester general chemistry series and serves as a prerequisite for CHEM 104. It is intended for students who already have a background in chemistry and have chosen a career or major based in the sciences. The course includes a mandatory laboratory component.

COURSE EXPECTATIONS

Upon completion of this course you will have acquired a foundation of knowledge in basic chemistry principles. Although there are plenty of resources to help you achieve this goal your grade will be determined by your ability to demonstrate your comprehension and knowledge by completing quality lab reports and assignments and performance in tests. Your grade is not determined by my perception or your perception of the time and effort you put into the class. Investing the necessary time and effort is an expectation.

REQUIRED MATERIALS

1. Textbook and Online Homework Package

Title: Chemistry: The Molecular Science, 5th Edition, with Owl.v2 Online Homework

Authors: Moore and Stanitski Publisher: Cengage

Hard Cover: ISBN 9781305431966 **or** Three Hole Punch: ISBN 9781305367487

2. Chemistry 103 Laboratory Manual and carbonless laboratory notebook. The manual and notebook can be purchased (cash only) from the first floor chemical stockroom, opposite the teaching lab.

3. Indirectly vented industrial quality eye protection is required in all chemistry laboratories. These, and ones that fit over regular glasses, can be purchased from the University Bookstore.

4. An electronic RF *i*-Clicker (not an i-clicker2 or webclicker) can be purchased from the University Bookstore, and must be brought to every lecture class.

5. An electronic calculator – either an inexpensive scientific or graphing calculator. Cell phone calculators are not allowed to be used in the laboratory or on tests.

6. An Owl.v2 account for access to on-line homework. This is bundled with your new textbook. Instructions for registering are given on the course homepage on Learn@UW.

For instructions as to how to enroll, go to this site:

http://login.cengagebrain.com/cb/entitlement.htm?code=E-TWQN66FZC6X7L

Problems with enrollment? Owlv2 Technical Support:
http://support.cengage.com/magellanweb/ClassLandingPage.aspx?optyId=1-200KJZG

7. USB Drive: A USB flash drive that will hold at least 2 GB is highly recommended for laboratory data collection.

8. Note packet (free!) available through the D2L course website.

COURSE INFORMATION

Course Expectations

Upon successful completion of this course you will have acquired a foundation of knowledge in basic chemistry principles. Although there are plenty of resources to help you achieve this, the attaining this goal depends on the time, effort, and ability of the individual student.

Course Organization

There are three components of CHEM 103; Lecture, Discussion and Lab.

Lecture

There are three lectures per week each 75 mins in length. During lectures you will be introduced to concepts, work through numerical problems, watch demonstrations, and answer clicker questions (counts towards final grade).To facilitate effective note taking a note packet will be available through the course website for each chapter of study which you will bring to the class. At the end of each chapter you will have a completed note packet which will help you review for midterm exams. At the end of the course you will have a complete set of notes which will prove extremely useful not only for the final examination, but also should you be planning on taking exams for professional schools in the future, e.g., MCAT, DAT, GRE etc. As there is not enough time to complete the entire note packet in the lecture class, recordings to help you complete the note packet will be available through the course website. These can be viewed at any time, but as the course progresses you will be expected to view some of the recordings *before the lecture*. This will give time in the lecture to concentrate on the more challenging parts of the course. Augmenting your notes using the textbook as a resource will also be an effective part of your learning strategy.

With large classes respectful classroom etiquette is expected. Cell phones should be turned off or at least silenced. While laptops are not prohibited in class, you will not have any need for them during lecture except to take notes. Using the computer or other devices during class for activities not related to the class is very distracting, not only for you but for those who are sitting nearby. Finally, the lecture room desks are very noisy when raised or lowered; so please wait until the instructor is completely done speaking before you lower your desk at the end of class. As much as possible class will be dismissed at 10:10 AM, but sometimes just another minute or two is needed to finish up. Please be considerate of your classmates.

We will use demonstrations during lecture to illustrate important ideas and facts. Be sure to make careful observations of what happens. Questions about observations or principles that have been presented via demonstrations may appear on exams.

Discussion Section

Three times each week, you will meet with a teaching assistant (TA) and your classmates for discussion. In these meetings, you will discuss assigned homework problems, work with groups of students to learn new material or reinforce/review existing ideas, learn about upcoming laboratory assignments, have a forum for answering questions, and take quizzes.

Laboratory

The laboratory experiments are a vital part of this course; you will develop skills that are not easily learned or demonstrated in lectures. These skills include:

- Designing experiments and interpreting data
- Using laboratory equipment properly
- Working with your fellow students in the laboratory
- Communicating your ideas about the data through discussions and writing

You must successfully complete all of the laboratory assignments to receive a passing grade in this course.

You **must** prepare in advance for each laboratory exercise by writing an introduction and procedural outline in your lab notebook. During the lab period you will carry out the experiment, take notes, and complete your data analysis. All your work **must** be turned in at the end of the period in the form of the duplicate pages from your lab notebook. You will be graded on your pre-lab preparation, in-lab experimental technique and data analysis, and on your note taking skills. Your laboratory report is almost always due at the end of the laboratory period. Late laboratory reports are not graded. The lab schedule is printed on the attached calendar. Exercises in italics are computer labs.

Please note that sandals are not acceptable footwear in the laboratory. Contact lenses should **not** be worn in the laboratory because fumes or splashes may be caught between them and your eye. Further attire requirements are described in your laboratory manual and by your TA.

You must attend all laboratory sessions. There is no opportunity to make up a laboratory that you miss; a grade of zero will be recorded for unexcused absences. If you have an excuse for missing lab, notify your TA as soon as possible, preferably before the lab period.

Health or Disability Concerns. If you have special needs, please make an appointment to speak to your lecturer and TA at your earliest convenience.

PROBLEM SETS AND HOMEWORK

Problem solving is a crucial aspect of this course and problems will be assigned on a regular basis. These will be completed online via the Qwl.v2 homework system. The system gives hints and allows multiple attempts, each with feedback. You can log on multiple times to complete the assignment. See Learn@UW for more information on the Owl.v2 online homework system. Due dates for assignments will be posted on the course website and also on Owl.v2 **but will tend to be Monday at 8:50 am.**

If you encounter technical difficulties with Owl.v2 pertaining to how answers are submitted/accepted or why you did not get credit for an answer that was later revealed to be correct, please send an e-mail to chem103hw@chem.wisc.edu with your name, course number (103), lecture section (2), and a brief description of your difficulty. The group of people who assist you will not answer content related inquiries.

Your textbook is an excellent source of additional practice problems, and answers to selected problems are given at the back of the book. Bring questions to your discussion section and to TA and faculty office hours. *In order to excel in this course you **must** solve problems. Lots of them.*

EXAMS AND QUIZZES

Quizzes. Quizzes will be given during discussion sections to help you evaluate your progress and to encourage you to memorize essential information. These quizzes count toward your final grade.

Exams. There will be two in-class exams of 120 minutes each and one two-hour comprehensive final exam. **Makeup exams will be only be arranged under extenuating circumstances given and prior permission, where possible, obtained.** Exams may include questions based on the laboratory material. **Please be alert to these exam dates.** You must report any religious conflicts with exams or laboratory exercises to your teaching assistant within the first two weeks of classes.

Exam Dates:	**Tuesday, June 30**	8:55 – 11:55 AM
	Tuesday, July 21	8:55 – 11:55 AM
	Friday, August 7	8:55 – 11:55 AM

GRADES

Grade Distribution

Below is the letter grade distribution for this class

A	90.0%
AB	86.0%
B	80.0%
BC	76.0%
C	70.0%
D	60.0%
F	<60.0%

This distribution will never be distributed up, i.e., a student achieving 90.0% or greater will receive an A grade, however, it may be distributed down depending on the final class grade distribution.

Grading Criteria

Two 90-minute exams	18% each
Online Homework	18%
Laboratory	20%
Quizzes and Clickers	6%
Final Exam	20%
Total	**100%**

Your scores will be available through Learn@UW

ADDITIONAL RESOURCES

Numerous resources are available to assist you with either this course in particular or college life in general. It is up to you to take advantage of these resources to ensure your success both in this course and at UW-Madison.

Course Web-site on Learn@UW (https://learnuw.wisc.edu/)**:** Our course website can be accessed via Learn@UW. The syllabus, schedules, office hours, TA lecture notes, course handouts, announcements and grades will all be available on Learn@UW.

General Chemistry Web Site (http://genchem.chem.wisc.edu/)**:** Resource materials for general chemistry students are available on the General Chemistry website. The computer laboratory exercises, ChemPages, and other lab resources are accessed via the "Materials for Labs" link. Copies of old exams from other lecturers are available in the "More for Students" section.

Study Groups: You may collaborate with other students on homework assignments and laboratory discussion questions. Study groups reflect the teamwork inherent in the way modern science is done; scientists frequently collaborate with others, either within the same department or at a distance with persons in other cities, states or countries. It is important to realize that although you may collaborate with other students on assignments, the work you submit must be your own.

Tutoring Services: A number of tutoring resources are available on campus, some free and some for a fee. For more information, see our Learn@UW site or the General Chemistry home page (http://genchem.chem.wisc.edu/) under the "More for Students" section.

Students with Disabilities: Appropriate accommodations for lecture, laboratory, discussion, and/or exams can be arranged for students with disabilities. The McBurney Disability Resource Center (http://www.mcburney.wisc.edu/) can provide assistance. Accommodations still must be made well in advance, so please pursue these avenues immediately.

Advising and Counseling Services (University Health Services): College life can be stressful. If you are struggling with your academic course load or other academic issues, your advisor is a good resource. If you are struggling emotionally with anxiety, depression, or other health issues, individual counseling is available at University Counseling and Consultation Services. For more information go their website (http://www.uhs.wisc.edu/home.jsp?cat_id=36) or call 265-5600. Crisis intervention services are also available 24 hours a day by dialing this same phone number and pressing option 9.

Academic Misconduct: It is expected that all students will conduct themselves with honesty, integrity, and professionalism. Any student caught cheating on an exam will receive an F in the course. Any student caught cheating on homework, a quiz, or lab (for instance, copying another person's work or fabricating data) will receive a zero for that assignment. A second infraction will result in an F for the course. More information on what constitutes academic misconduct and policies on handling misconduct can be found in your chemistry lab manual and at the following website: http://www.wisc.edu/students/saja/misconduct/UWS14.html

COURSE OUTLINE AND CALENDAR

Dates for lecture topics are **approximate**. The exam dates are **fixed**. The course website on Learn@UW will have details of the specific recordings to watch and assignment due dates.

Week	Class	Unit	Lab
1	Class 1 6/15 Class 2 6/17 Class 3 6/19	Unit 1 Unit 1 Units 2	Lab 1: 6/16 Citizenship in Lab Lab 2: 6/18 Solutions and Density
2	Class 4 6/22 Class 5 6/24 Class 6 6/26	Unit 2 Units 2 and 3 Unit 3	Lab 3 6/23 Zn and Iodine Lab 4: 6/25 Chemical Logic
3	Class 7 6/29 Class 8 7/1 Class 9 7/3	Unit 3 Unit 4	Lab 5: **6/30 Exam 1** Lab 6: 7/2 Synthesis of an Alum
4	Class 10 7/6 Class 11 7/8 Class 12 7/10	Unit 4 Units 4 and 5 Unit 5	Lab 7: 7/7 No Lab Lab 8: 7/9 Solution Calorimetry
5	Class 13 7/13 Class 14 7/15 Class 15 7/17	Unit 5 Units 5 and 6 Unit 6	Lab 9: 7/14 Light, Color, Solutions Lab 10: 7/16 No Lab
6	Class 16 7/20 Class 17 7/22 Class 18 7/24	Unit 6 and 7 Unit 7 Unit 7 and 8	Lab 11: **7/21 Exam 2** Lab 12: 7/23 Molecular Structures
7	Class 19 7/27 Class 20 7/29 Class 21 7/31	Unit 8 Units 8 and 9 Unit 9	Lab 13: 7/28 Project Lab Lab 14: 7/30 No Lab
8	Class 22 8/3 Class 23 8/5 Class 24 8/7	Units 9 and 10 Unit 10 **Final Exam**	Lab 15: 8/4 Window on the Solid State Lab 16: 8/6 No Lab