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Chemistry 122 - 001, General Chemistry I, Spring 2024

Dr. Nahla A. Hatab

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Lectures:

9:10 – 10:00 AM (MWF) Buehler 555

Office: 305 Strong Hall

Office Hours: 11:00 – 2:00 PM (M), 10:30 – 2:30 PM (W), or by appointment, please send me an email to schedule an appointment.

Email: nabuhata@utk.edu. Given the massive amount of email I receive, you must include a subject that is informative and your name with course number. Please don't hesitate to email me with updates, questions, or concerns. I will respond to all emails usually in no more than 24 hours.

Lecture TA: Miranda Limbach mlimbach@vols.utk.edu

Textbook: Zumdahl/Zumdahl/DeCoste's Chemistry: An Atoms First Approach, 3rd Edition, (ISBN 9798214192451). Publisher: Cengage. A package of the digital format of the textbook and online homework materials is provided through the **Inclusive Access program**. OWLv2 and the e-text are included with your Inclusive Access purchase. There will be an optional loose-leaf textbook available in the VolShop for \$31.25 for any student in the Inclusive Access Program. You do not need to purchase a hard copy unless you wish to.

Canvas: Class announcements, lecture notes, course documents, and grades will be posted on Canvas (utk.instructure.com). Students are responsible for monitoring their UTK e-mail account and the course site.

Clicker: A clicker is required for the course. There will be clicker questions in many lectures. I will count the clickers two different ways: 1) Attendance 2) As participation points. All questions will be worth 2 points for the correct answer, 0 point for the incorrect answer and 2 points for attending lecture. You do not need to purchase a physical clicker since you can use a laptop or your mobile device as a clicker. Please register your clicker online (<https://oit.utk.edu/teachingtools/clickers/>). There are no make-up points for clickers.

Technical Support: For technical issues, contact the OIT HelpDesk by phone at (865) 974-9900 or at the [Walk-in HelpDesk](#). For IT and Computing issues, use the online [Contact Form](#)

Course Description: First course in a two-semester sequence covering fundamental principles of chemistry. Topics covered include atomic structure, the periodic table, Molecular bonding and structure, Chemical Stoichiometry, basic of thermochemistry, and properties of gases.

I expect from you the following:

- Be prepared for all classes
- Be respectful of others
- Actively contribute to the learning activities in class
- Abide by the UT Honor Code

Grading:

Three exams:	45% (Exam 1: 15% - Exam 2: 15% - Exam 3: 15%)
Online Homework assignments	15%
Quizzes	15%
Participation (Clicker& Attendance)	5%
Final Exam (comprehensive)	20%

Grading Scale:

• 94 and above:	A
• 88.0 – 93.9	A-
• 84.0 – 87.9	B+
• 80.0 – 83.9	B
• 76.0 – 79.9	B-
• 72.0 – 75.9	C+
• 68.0 – 71.9	C
• 64.0 – 67.9	C-
• 60.0 – 63.9	D+
• 56.0 - 59.9	D
• 52.0 - 55.9	D-
• 51.9 and below	F

Note: These letter grade assignments are subject to change, but only in the direction beneficial to the students.

Exams: There will be three (3) 90 minutes evening exams and one (1) two hours Final exam. The three exams will be given on the selected days (see below) at 7:00 – 8:30 pm. The final exam will be given during the final exam period. No make-up exams will be given. If one of the three exams is missed due to excused absence, then the final exam will count as the excused exam grade. An excused of missed

exam or absence will only be considered with the support of written documentation. **The re-grading of an exam** must be requested within 5 school days of receiving the graded exam. To request a regrade, you will need to staple the regrade form (found online) with your name and a brief description of what the issue is to your exam and turn it into me. With regrades, the entire exam will be regraded. The final exam will be comprehensive and will count for 20% of the final grade and will be given during final exam week. The room will be announced later in the semester via Canvas and email. Every student is required to take a comprehensive final exam during the schedule exam period. *If the final exam is a higher grade than the lowest exam grade then the final exam grade will replace the lowest exam grade as long as all 3 regular exams are taken.*

Exam Schedule (All locations are TBA)

Exam 1: Tuesday February 13th from 7:00-8:30 pm

Exam 2: Tuesday March 5th from 7:00-8:30 pm

Exam 3: Tuesday April 16th from 7:00-8:30 pm

Final Exam: Thursday May 9th from 10:30-12:30 pm

Quizzes: We will be having announced OWLv2 quizzes online. These quizzes will cover material from lecture notes, workshops, and reviews. These will count for 15% of your final grade. No makeup quizzes are given. If you miss a quiz due to a university approved excuse you will need to present official documentation to me; the missed quiz will be left out of your grade and the remaining quizzes will be used. The lowest two quizzes grade will be dropped at the end of the semester.

Online Homework: Online homework counts for 15% of the final grade, and no credit will be given after the due date. To access your course materials, you must first login to your Canvas account and click the link for Chem 122 course. Please use your vols account to login. If you see a message saying “you already have an account”, then click “forgot password” and reset your account. If you are still having problems then email Ms. Jennifer McCown, Jennifer.mccown@cengage.com. We will be using OWLv2 electronic homework system. Once you get access to the online homework course, you will do the following assignments:

- (1) Four short introduction assignments
- (2) Math review assignment
- (3) Quick Prep assignment

These assignments will introduce you to OWLv2 system and prepare you for the course. Finish these assignments as early as possible so you can focus on the course material we will cover.

You will have four types of homework assignments for each chapter. They are described in the following table

Assignment Type	Grade	Given Attempts	Description	Best Time to Do the Assignment
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Mastery	Graded	10	Single concept questions, comes with group (3 questions per group). Need to answer 2 out of 3 correctly to get credit.	After the concept is covered in each lecture. Don't wait until the chapter is finished and too many concepts are covered.
EOC (End Of Chapter)	Graded	6	Multi-concept questions, applications	After Mastery assignments and after the chapter is finished.
Multimedia Activity	Not graded		Short videos, simulations	Before lecture, get some ideas what will be covered in lecture
Adaptive Study Plan	Not graded		Test and study plan based on your test result	After chapter is finished, preparation for exams

Extra Help: In addition to my office hours, two other resources are available for you:

1) TAs will have office hours that will be announced during the first week of class. All TA office hours will be in the Chemistry Learning Centers (Buehler 513 & 303 Strong Hall). It's free and staffed by Graduate teaching assistants from Monday to Friday.

2) Student Success Center. A supplemental Instruction (SI) is also free for all the students who want to improve their understanding of the course content. For more information, please see <https://studentsuccess.utk.edu>

Calculator policy: Non-programmable scientific calculators such as TI 30 are allowed. No graphing calculators. Bring a calculator to lecture, and exam.

ACADEMIC DISHONESTY: An act of academic dishonesty may lead to such penalties as reduction of grade, probation, suspension, or expulsion from the University. I reserve the right to assign a grade of zero for actions involving violations of the following University of Tennessee Honor Code:

"An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."

IN summary, this course has a zero tolerance policy on cheating. Individual cases will be prosecuted to the full extent possible.

Generative AI Tools: In this course, it is expected that all submitted work is produced by the students themselves. Students must not seek the assistance of Generative AI Tools like ChatGPT. Use of a Generative AI Tool to complete an assignment constitutes academic dishonesty.

Disability Services: please contact the Office of Disability Services (ODS) at 2227 Dunford Hall, phone 974-6087 or use <http://ods.utk.edu>, if you require course adaptations or accommodations due to a

disability, or if you have emergency information to share. The disability must be documented. ODS will work with the students and the faculty to coordinate reasonable accommodations for students with documented disabilities.

Learning Objectives for General Chemistry 122:

1. Learn and become familiar with different units used for measurements, the uncertainty associated with these measurements and how to convert from one unit to another.
2. Learn the terminology (language) of chemistry, including chemical symbols, chemical formulas, nomenclature, and chemical equations.
3. Gain an understanding of atomic structure and the formation of molecules, ions, and compounds.
4. Obtain a good understanding of electronic structures of atoms, the organization and information conveyed by the periodic table of the elements.
5. Acquire a thorough introduction to basic concepts of chemical bonding and modern bonding theories, and be able to predict shapes of molecules and ions.
6. Be able to demonstrate the use of rules and procedures for naming molecular and ionic compounds.
7. Understand the stoichiometry in chemical equations, and be able to apply it to quantitatively predict and analyze the chemical reactions.
8. Obtain knowledge of the basics of thermochemistry.
9. Learn the fundamentals of gases.
10. Develop analytic reasoning, mathematical problem-solving skills and learn to think critically.

Always bring your student ID to all lectures, and exams. Keep your cell phone off during lectures, and exams.

Week	Lecture (MWF)	Workshop/Exams
January 22 – January 26	Chapter R	Chapter R Workshop
January 29 – February 2	Chapter 1	Chapter 1 Workshop
February 5 – February 9	Chapter 2	Chapter 2 Workshop
February 12 – February 16	Chapter 2	Chapter 2 Workshop Exam 1 (2/13: 7:00-8:30 pm)
February 19 – February 23	Chapter 2 and 3	Chapter 2&3 Workshops
February 26 – March 1	Chapter 3	Chapter 3 Workshop
March 4 – March 8	Chapter 3 and 4	Chapter 3&4 Workshops

		Exam 2 (3/5: 7:00-8:30 pm)
March 11 –March 15	No Class – Spring Break	
March 18 – March 22	Chapter 4	Chapter 4 Workshop
March 25 – March 29 3/29 No Class (Spring Recess)	Chapter 5	Chapter 5 Workshop
April 1 – April 5	Chapter 5 and 6	Chapter 5&6 Workshops
April 8 – April 12	Chapter 6	Chapter 6 Workshop
April 15 – April 19	Chapter 6 and 7	Exam 3 (4/16: 7:00-8:30) Chapter 6&7 Workshops
April 22 – April 26	Chapter 7	Chapter 7 Workshops
April 29 – May 3	Chapter 8	Chapter 8 Workshop
May 6 – May 10 Study day (5/8)	Chapter 8 Final Exam (Thursday 5/9: 10:30-12:30 PM)	Chapter 8 Workshop

The instructor reserves the right to revise, alter, or amend this syllabus as necessary. Students will be notified in writing / email of any such changes.