Chemistry 101 Course Policies

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Office hours Mondays 2–3 P.M.; Thursdays 10–11 A.M. (after lecture), and by appointment

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COURSE INFORMATION

Times:

Lecture Tuesday and Thursday: 9:00–9:50 A.M., 100 NL

Lab Wednesday

Discussion Friday

Required Materials:

Textbook: *Introductory Chemistry,* 8th or 9th Ed., S. S. Zumdahl and D. J. DeCoste
Lab manual: *Chemistry 101 Syllabus and Lab Book,* Spring 2018
Calculator: Any calculator that performs scientific notation.
Safety goggles: You must purchase the Honeywell Uvex Stealth OTG safety goggles. These can be purchased in the bookstore or online.
Regulation lab apron or lab coat: This can be purchased in the bookstore.
Lab notebook: This can be purchased in the bookstore.
Usage fee card: This must be purchased at the Illini Union Bookstore, 809 S. Wright St., Champaign.
iClicker: This can be purchased in the bookstore.

Grading:

Hour exams (3)	450
Final exam	300
Lab write-ups	150
Electronic HW	50
Stoichiometry Workshop	20
TA Evaluation	20
Lab Cleanliness	10
	1,000

Exam Dates:

There will be three hour exams during the semester. These will be given from 7:00 P.M. to 8:15 P.M. on:

Thursday, February 8	(Chapters 1, 2, 3.1–3.5, 4, 5, 8, 13.1–13.9)
Thursday, March 15	(Chapters 6, 7.1–7.4, 9.1–9.4, 13.10, 15.1–15.2, 15.4–15.7)
Thursday, April 26	(Chapters 10.1–10.3, 11, 12, 14.1, 14.3–14.4)

Conflicts for exams must be arranged ahead of time by signing up outside of 3014 Chem Annex.

Final Exam:

Friday, May 11, 8:00–11:00 A.M.

The final exam will be cumulative. There is no scheduled conflict for the Final Exam. **Do not** make plans to leave campus before the Chemistry 101 final.

COURSE DETAILS

Lectures:

Lectures meet each Tuesday and Thursday from 9:00–9:50 A.M. in 100 Noyes Lab.

The purpose of the lecture is to present main concepts and ideas. The emphasis is on how to think about chemistry. Active participation (asking/answering questions and talking to your peers) is essential, especially through the use of your i-Clicker.

Discussions:

Discussion sections meet each Friday. This is the time to ask questions of a teaching assistant and to be asked conceptually challenging problems. Active participation is required.

Laboratory:

Labs meet each Wednesday. Always bring your textbook, lab manual and calculator to lab. You will perform the experiment or activity and complete as much of the lab write-up as you can before leaving the lab. If you decide to leave the lab early, you must turn in your lab write-up (anything not completed will be given a score of zero). Lab write-ups are due within the first five minutes of your Friday discussion section (or in one case next lab section) or else NO CREDIT is given. The exceptions are the Review Questions before each exam. These are due online by the specified due date. We also encourage you to turn lab write-ups in early! Furthermore, you will often perform your lab experiments with at least one other person. While this collaboration is important and helpful, you will submit your *own* lab write-up and write it in your own words. The only way to assess what you learned as an individual is to grade your *own work*! Turning in identical lab write-ups is considered cheating. We will follow the university code regarding any Academic Integrity violation: http://studentcode.illinois.edu.

You must be present in lab to receive credit for the lab write-up. Late lab write-ups will not be accepted.

Students must watch the safety video in LON-CAPA and agree to follow the safety rules before they attend their first lab. Students who fail to complete this quiz will not be allowed to attend lab and will receive a zero for each week until the safety quiz is complete..

Office Hours:

Office hours are in 3014 Chemistry Annex Tuesdays from 2:00–3:00 P.M. and Thursdays from 10:00–11:00 A.M. (after lecture). You can also make an appointment to meet with me by seeing me after lecture or sending me an e-mail.

TAs will have at least 2 hours of office hours each week in the Chemistry Learning Center. Your TA will discuss these with you in class in both lab and discussion.

Regrade Policy:

Regrades on any lab write-ups must be submitted within *one week* of receiving the graded lab. Regrades on exams must be submitted by the *end of that class period* in which the exam is returned.

Learning Center (2021 Chem Annex):

General chemistry TAs will usually be available for assistance in the Learning Center from 9 A.M. to 5 P.M. Monday–Friday during the weeks classes are in session. Additional texts, study aids, and computers are available.

The hours of operation for the Learning Center are:

Monday–Thursday	8:30 A.M.–9:00 P.M.
Friday	8:30 A.M.–5:00 P.M.
Saturday	CLOSED
Sunday	3:00 P.M.–9:00 P.M.

(These hours are subject to change. Always check www.chem.illinois.edu for the most current hours.)

Students with Disabilities:

To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class are asked to see the instructor as soon as possible.

Academic Integrity:

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Certain assignments may be submitted through software, which can check for plagiarism. By enrolling in this course, you are indicating implicitly to the instructor that you have read, understand and accept the university's policies and procedures regarding academic integrity and dishonesty (http://studentcode.illinois.edu).

LECTURE SYLLABUS—SPRING 2018

DATE	TOPIC	CHAPTER
1/16, 1/18	Atoms, Molecules, and Ions	4 (plus 1, 2, 3, 5)
1/23, 1/25	Chemical Composition	8
1/30, 2/1, 2/6	Gases	13.1–13.9
2/8 (Thursday)	**EXAM I: 7:00–8:15 P.M.**	
2/13, 2/15	Chemical Equations and Reactions in Aqueous Solutions	6, 7.1–7.4
2/20	Solutions	15 (Sections 1, 2, 4, 5)
2/22, 2/27, 3/1, 3/6, 3/8	Stoichiometry	9, 13.10, 15.6–15.7
3/13	Stoichiometry Workshop	
3/15 (Thursday)	**EXAM II: 7:00–8:15 P.M.**	
3/27	Energy	10.1–10.3
3/29, 4/3, 4/5, 4/10, 4/12	Modern Atomic Theory and Chemical Bonding	11, 12
4/17, 4/19, 4/24	Liquids and Solids	14 (Sections 1, 3, 4)
4/26 (Thursday)	**EXAM III: 7:00–8:15 P.M.**	
5/11 (Friday)	**FINAL EXAM: 8:00-11:00 A.M.**	

LABORATORY SCHEDULE

	Meets On:	Lab Write-up Due:
Introduction and Check-In	January 17	—
Activity 1: Measurements	January 24	January 26
Lab 1: Explorations with Gases	January 31	February 7
Review Questions for Exam I	February 7	February 7
Go over Exam I	February 14	—
Activity 2: Nuts & Bolts and Stoichiometry	February 21	February 23
Lab 2: Copper-Iron Stoichiometry	February 28	March 2
Lab 3: Limiting Reactants	March 7	March 9
Review Questions for Exam II	March 14	March 14
Go over Exam II	March 28	—
Lab 4: Weak Acid Unknown	April 4	April 6
Lab 5: Modern Atomic Theory	April 11	April 13
Activity 3: Making Models of Molecules	April 18	April 20
Review Questions for Exam III	April 25	April 25
Go over Exam III/Final Exam Review	May 2	—

ELECTRONIC HOMEWORK SCHEDULE

NOTE: We will be using the OWL system for electronic homework. This is different from what is in your Syllabus/Lab Book. Due dates (all by 10:00 pm):
Chapter 2: Friday, January 19
Chapter 3: Monday, January 22
Chapter 4: Wednesday, January 24
Chapter 5: Friday, January 26
Chapter 8: Tuesday, January 30
Chapter 13 (Part 1): Friday, February 2
Chapter 13 (Part 2): Tuesday, February 6
Chapter 6: Friday, February 16
Chapter 7: Wednesday, February 21
Chapter 15: Friday, February 23
Chapter 9 (Part 1): Friday, March 2
Chapter 9 (Part 2): Wednesday, March 7
Chapter 13 (Gas Stoichiometry): Friday, March 9
Chapter 15 (Solution Stoichiometry): Tuesday, March 13
Chapter 10: Friday, March 30
Chapter 11 (Part 1): Friday, April 6
Chapter 11 (Part 2): Wednesday, April 11
Chapter 12 (Part 1): Friday, April 13
Chapter 12 (Part 2): Friday, April 20
Chapter 14: Tuesday, April 24

SUGGESTED TEXTBOOK HOMEWORK FOR CHEMISTRY 101

This homework is in addition to the electronic homework. Your TA will tell you the specific due dates for the particular problems they assign, and collect them at the beginning of Friday discussion sections. You are expected to understand all of the concepts in these problems. Each problem is found under the *Questions and Problems* section at the end of the chapter.

Note: Chapter 2 and Chapter 3 homework is due Friday, January 20.

Text Homework for Exam I

Chapter 2: 5, 7, 11, 24, 29, 31, 32, 33, 37, 60, 92

Chapter 3: 12, 15, 18, 19, 20, 27, 28, 29, 31, 39, 57

Chapter 4: 9, 10, 13, 14, 19, 39, 42, 43, 53, 60, 74, 77, 83, 84, 91, 93, 104

Chapter 5: 9, 10, 13, 14, 17, 19, 22, 33, 35, 36, 39, 41, 43, 45, 50, 57, 60, 73, 77, 78, 83, 84, 91, 93

Chapter 8: 6, 8, 11, 14, 16, 18, 19, 22, 27, 29, 32, 34, 37, 46, 50, 52, 55, 58, 59, 66, 70, 77, 81, 92, 100, 118, 124

Chapter 13: 2, 17, 21, 24, 31, 36, 37, 42, 43, 52, 56, 60, 69, 75, 77, 78, 81, 82, 105, 106, 128, 138, 146

Text Homework for Exam II

Chapter 6: 2, 6, 13, 16, 18, 19, 21, 24, 29, 34, 38, 40, 41, 43, 73, 76

Chapter 7: 11, 15, 18, 21, 26, 40

Chapter 15: 34, 35, 37, 41, 47, 55, 56, 58, 62

Chapter 9: 5, 12, 14, 16, 19, 24, 29, 35, 37, 45, 48, 52, 56, 90

Chapter 13: 85, 87, 113

Chapter 15: 64, 65, 67, 70, 71

Text Homework for Exam III

Chapter 10: 6, 7, 13, 14

Chapter 11: 3, 5, 6, 12, 16, 19, 25, 26, 29, 31, 35, 39, 45, 47, 50, 51, 56, 58, 61, 63, 73, 74, 76, 95, 116

Chapter 12: 1, 7, 8, 11, 14, 16, 19, 23, 25, 33, 38, 40, 43, 44, 45, 48, 60, 65, 66, 67, 77, 78, 80, 81, 86, 110, 116, 119

Chapter 14: 5, 7, 8, 9, 10, 11, 19, 21, 25, 27, 31, 74, 75, 76, 80

Laboratory Conduct and Policies

PREFACE

This Lab Book contains laboratory experiments, activities, and review questions. All of these have the same goal—to get you to actively think about the chemical principles involved. The emphasis is not on memorization of the "what's" but on understanding of the "how's" and the "why's" of chemistry.

Something you should take note of immediately is that the procedure sections of the labs in this book are quite short and do **not** list steps for you to follow. This requires you to read and think about the experiments **before** coming to lab.

In general, before coming to lab, you should:

1. Read about the experiment.
2. Think about the procedure you will follow and write this in your notebook.
3. Read the background material (in the text and your lecture notes).
4. Write any tables you will need for your data/observations in your notebook. Give some thought to the organization of the tables.
5. Read and think about the questions.

The questions asked of you for the lab write-ups often ask for the significance of your results. This requires that you not only understand **what** you did, and **how** you did it, but **why** you did it. It is best to think about all of this before coming to lab.

Also, the discussion questions (or "Additional Questions") **cannot** be answered adequately by merely copying words or phrases from the text. These questions require that you apply the knowledge you are getting from the text, lectures, and discussion sections. You will find that you will not be able to answer all of the questions immediately, but that is the point; **you should think about these questions for an extended period of time.** Take advantage of your time in the lab to discuss these questions with others in the class. You will have sufficient time to think about these questions, and to complete your lab write-ups.

In general, the lab write-ups should include a discussion of your procedure (when appropriate) along with your observations. Finally, you should discuss the significance of your findings by answering the questions. When you are asked to include observations and data, make sure they are presented neatly, and in a format that makes sense. Also, be sure to show all of your work for your calculations.