
SYLLABUS FOR CHEM 3A: INTRODUCTORY GENERAL CHEMISTRY

Reedley College

Section 56499

Fall 2012

Instructor: Mrs. Jodi Kawagoe email: jodi.kawagoe@reedleycollege.edu phone: 393-1654 (text only)

Class times: Lecture: MWF 9:00–9:50 am in PHY 82
Lab: W 11:00–1:50 pm in PHY 82

Texts: Tro, *Introductory Chemistry*, custom edition with MasteringChemistry (ISBN 0-558-52481-8)

Materials: Safety glasses, lab coat & scientific calculator (with exponential notation and logarithms)

Holidays: Monday, September 3; Monday, November 12; Friday, November 23

COURSE DESCRIPTION

This is a survey course in the principles of inorganic chemistry covering the composition of matter, physical and chemical changes, atomic and molecular structure, inorganic nomenclature, chemical formula and reaction calculations, gas laws, bonding, solutions, net ionic equations, acid-base theories, pH, oxidation-reduction reactions, thermodynamics, nuclear chemistry and equilibrium. The course emphasizes problem solving and chemical calculations. Both qualitative and quantitative theory and techniques will be covered. It is intended for applied science and non-science majors or for students preparing to take Chemistry 1A

COURSE PREREQUISITE

Mathematics 103

COURSE ADVISORIES

English 1A and Chemistry 10 or high school chemistry

DROP DATE

The drop date is Friday, October 12, 2012. After that date the instructor is required to assign a letter grade that will appear on your transcript. If you plan to drop the class, you should do so yourself. Do not depend on the instructor to drop you because of nonattendance. Students with an F average or a poor attendance record at the drop date should discuss their status with the instructor; the instructor may drop such students.

SUCCESS IN CHEMISTRY

To succeed in this class you do not have to be a genius but you will need to work hard. You will need to study at least 6 hours each week outside of the classroom. This time will include reading, studying, and doing homework assignments. Preparing labs will require additional time. It is essential that you listen effectively and that you take good lecture notes in class. **Read the assigned material before coming to class** and be prepared to ask questions during the lecture. Chemistry is a cumulative subject; later topics require a good understanding of the earlier material. **It is essential that you not fall behind in your work.**

ATTENDANCE

Attendance in lecture and lab is expected. You will be dropped from the class if you are absent for 2 weeks without contacting me. If you do miss a lecture, go to Blackboard to view the slides that we covered that day and be sure to read text book.

HOMEWORK

Mastering Chemistry Course ID: KAWAGOE FALL 2012

Doing homework is essential to learning chemistry. Homework assignments for each chapter can be found on the www.MasteringChemistry.com site. They are available the day before we begin a chapter and are due at midnight the night before we start the next chapter. **Assignments submitted after the due date are penalized 20% for each day late.** For assistance in registering with MasteringChemistry, see the printed instructions or slides that are posted on the course Blackboard site. If you still have trouble, please contact me. While doing the homework, you may use the book, a friend/tutor, or ask me in class or via email or text message. You should be able to do each assignment in 90 to 120 minutes. The first assignment will teach you how to use MasteringChemistry.

MEMORIZATION QUIZ

During the second and third weeks of the semester I will give you a quiz which requires that the following information be memorized. It will be worth 100 points (equivalent to one lab) in the lab grade. You will have three chances to pass with 80% or better, otherwise, you will get a zero for that assignment. If you get 80% or better, you get all 100 points. The quiz will be given at the beginning of class so if you are late you will have less time or may miss the quiz entirely.

Memorize the following (for a detailed list, see Blackboard):

- The names, symbols and spelling of elements 1—38, 47, 50, 53—56, 78—80, 82 the periodic table
- The names, abbreviations and values of the metric prefixes kilo, centi, milli, micro, and nano (see Table 2.2)
- The names, formulas and charges for the polyatomic ions: sulfate, phosphate, chlorate, nitrate, peroxide, cyanide, hydroxide, acetate.

The material on the quiz will be random but will only contain the material listed above. You will have 5 minutes to complete the quiz. Expect 10-20 multiple choice questions of the following type:

What is the name of the element with the symbol F?

- Flourine
- Phosphorus
- Fluorine
- Iron
- None of the above

What is the formula of the nitrate ion?

- NO_3
- NO_3^-
- NO_2^-
- NO_3^{2-}
- None of the above

EXAMS

There are four scheduled exams and a cumulative final exam in this class. **There are NO MAKEUPS for missed exams. NO EXCEPTIONS!** If you absolutely must be absent on the day an exam is scheduled, you may discuss with me the possibility of taking the exam **early**. The two-hour final exam will cover new material (chapter 17) and cumulative material (chapters 1-14). Your score on the cumulative portion of the final exam can be used to replace a low score on a previous exam.

LAB

Lab work will follow as closely as possible the material discussed in the lectures. There is no published lab manual for this course. All the lab assignments and experiments are available on Blackboard. It is your responsibility to print the assigned experiment and bring it with you to class. Prelaboratory assignments are due at the beginning of the lab period. Some weeks we

will have study guides (worksheets) instead of or in addition to experiments. There will be one lab score for each week. Lab reports are due on the following Monday. You may not leave lab early unless you have completed and turned in the lab assignment. Late labs will be penalized 25%. No labs will be accepted after I have graded that lab. The lowest lab score of the semester will be dropped. Any missed labs will receive a grade of zero. **It is not possible to make up missed labs.**

ELECTRONIC DEVICES

Technology is wonderful in its place. Please silence your cell phone during class and refrain from texting or surfing the internet. If your cell phone rings during an exam you will lose 5% on the exam grade; if you are caught using your phone during an exam you will receive a zero for that exam. **You may NOT use the calculator on your cell phone during an exam.**

GRADING

The grading scale will be based on a straight percentage:

A = 100% - 90%
B = 89% - 80%
C = 79% - 70%
D = 69% - 60%
F = 59% - 0%

The final grade will be calculated as follows:

Average of exams	50%
Final exam	20%
Homework	5%
Lab grade	25%

CANCELLED CLASSES

If I have to cancel a class there will be a notice on the door and on Blackboard stating that the class is cancelled.

BLACKBOARD

You are strongly encouraged to make use of Blackboard. It is like a virtual blackboard on the internet where I can post announcements. You can find the course syllabus, lecture and lab schedules, lab experiments and PowerPoint slides. Slides will be posted in a full-size, color version and as a black & white, 6 slides/page handout version. Some students may find it helpful to print the handout version to bring to class. Please see me if you need help with Blackboard.

ACADEMIC DISHONESTY

Cheating is one of the worst things you can do in college. **The penalty for cheating is a zero for both the originator and the copier for that assignment or exam.** Anyone caught cheating will have to meet with the instructor to discuss continued enrollment in the class. I encourage you to work with each other on homework. However, working together is not the same as copying someone's work. You don't learn anything by copying work. Allowing someone to copy your work is also cheating.

ACCOMMODATIONS

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible. Please let me know if you have any unusual circumstances in your personal life that may affect your performance or attendance in class.

CHEM 3A SCHEDULE

Week	Date	Monday	Wednesday	Lab	Friday
1	Aug 13-17	Syllabus, Ch. 1, Ch. 2 Measurement & Problem Solving	Ch. 2	Safety lecture, SG 1: Dimensional Analysis Exp. 3: Density of Liquids and Solids	Ch. 2
2	Aug 20-24	Ch. 3 Matter & Energy	Ch. 3	Exp. 1: Properties and Changes of Matter	Ch. 3
3	Aug 27-31	Ch. 4 Atoms & Elements	Ch. 4	Exp. 2: Calorimetry	Ch. 4
4	Sep 3-7	No Class Labor Day	Ch. 5 Molecules & Compounds	SG 2: Nomenclature	Exam 1 (1-4)
5	Sep 10-14	Ch. 6 Chemical Composition	Ch. 6	Exp. 5: Simplest Formula of a Compound	Ch. 6
6	Sep 17-21	Ch. 7 Chemical Reactions	Ch. 7	Exp. 7: Reaction Types: Copper Chemistry	Ch. 7
7	Sep 24-28	Ch. 8 Quantities in Chemical Reactions	Exam 2 (5-7)	Exp. 6: Percentage of Oxygen in Potassium Chlorate	Ch. 8
8	Oct 1-5	Ch. 9 Electrons in Atoms & the Periodic Table	Ch. 9	Exp. 4: Relative Masses of Zn and Cu	Ch. 9
9	Oct 8-12	Ch. 10 Chemical Bonding	Exam 3 (8-9)	Exp. 8: Synthesis of Alum from Aluminum	Ch.10
10	Oct 15-19	Ch. 10	Ch. 11 Gases	SG 3: Lewis Diagrams & Molecular Models	Ch. 11
11	Oct 22-26	Ch. 11	Ch. 11	Exp. 9: Production of Hydrogen Gas	Ch. 15 Chemical Equilibrium
12	Oct 29 - Nov 2	Ch. 15	Ch. 15	Exp. 14: Molar Mass of a Volatile Gas	Ch. 12 Liquids, Solids, & Intermolecular Forces
13	Nov 5-9	Exam 4 (10, 11, 15)	Ch. 12	Exp. 13: Percent of Water in Hydrates	Ch. 12
14	Nov 12-16	No Class Veterans' Day	Ch. 13 Solutions	Lab Practical 1	Ch. 13
15	Nov 19-23	Ch. 13	Ch. 14 Acids & Bases	Exp. 11: Acid-Base Titration	No Class Thanksgiving
16	Nov 26-30	Ch. 14	Ch. 14	Exp.10: pH Lab	Ch. 17 Radioactivity & Nuclear Chemistry
17	Dec 3-7	Exam 5 (12-14)	Ch. 17	Exp. 12: Lab Practical 2	Ch. 17
18	Dec 10-14	No Class	Final Exam 9:15—11:15 am	No Lab	No Class