

**REEDLEY COLLEGE
CHEMISTRY 1A COURSE SYLLABUS
FALL 2012, SECTION # 53989**

INSTRUCTOR: MR. SCOTT HODGES

E-MAIL ADDRESS: scott.hodges@fresnocitycollege.edu

LECTURE: Tuesday and Thursday: 3:30-4:45pm, Physical Science Room 76

LAB: Tuesday and Thursday: 5:00-7:50pm, Physical Science Room 82

OFFICE: TBA

PHONE: 638-3641 **EXT.:** TBA

OFFICE HOURS: By Appointment

WEBSITES: <http://blackboard.reedleycollege.edu>; <http://www.masteringchemistry.com/site>

REQUIRED ITEMS:

TEXT: NIVALDO J. TRO, "CHEMISTRY: A MOLECULAR APPROACH" CUSTOM EDITION
FOR CHEM 1A, CSU FRESNO with "Mastering Chemistry" online homework

LAB BOOK: Dekker: Quantitative and Qualitative Laboratory Experiments BOOK A

ONLINE ACCESS AND E-MAIL ADDRESS

SCIENTIFIC CALCULATOR: Exponential and log functions but not programmable

LAB SUPPLIES: Approved splash goggles, lab coat, and closed shoes

PREREQUISITE: High School Chemistry or CHEM 10 and MATH 103 or equivalent

ADVISORY: Eligibility for English 125 and 126 or English as a second language 67 and 68 recommended.

TEACHER-STUDENT COMPACT

As a *teacher* I will:

1. *Teach*
2. *Prepare* all lessons carefully
3. *Provide* opportunities for each student to learn
4. *Act* professionally at all times
5. *Treat* each student respectfully
6. *Maintain* a safe and orderly classroom
7. *Use* your time wisely

As a *student* I will:

1. *Learn*
2. *Prepare* for each class carefully
3. *Take* advantage of each opportunity to learn
4. *Act* maturely at all times
5. *Treat* the teacher and other students respectfully
6. *Obey* all class rules
7. *Use* my time wisely

GRADING SCALE

The overall student grade is calculated based upon a weighted average as shown below.

<u>Title</u>	<u>Percentage</u>
4 Exams	40 %
1 Comprehensive Final Exam*	25 %
Homework (MasteringChemistry), Pre-Lecture Quizzes, Participation	10 %
Study Guides and Labs	25 %

* *The student must score 50 % or better on the comprehensive final exam to pass the class*

The overall letter grade will be calculated according to the following scale.

90 % and above	A
Between 80 % and 89.9 %	B
Between 70 % and 79.9 %	C
Between 60 % and 69.9 %	D
Below 60 %	F

A curve may be used.

POLICIES

The following requirements must be met in order to receive a passing grade.

- An overall class average of 70 % or better.
- An overall Laboratory score of 60 % or better. A score of less than 60 % in laboratory will result in a grade of F regardless of the score within lecture.
- A score of 50 % or better on the comprehensive final exam regardless of the previous exam scores.

LAB REPORTS

The lab reports are a significant portion of your overall grade. Most of the lab reports are due on the day the lab is completed. Some of the labs require completion of a pre-lab before the day of the lab. Students will not be allowed to participate in these labs if the pre-labs are not completed before the beginning of the labs. Students are required to follow all lab policies as outlined in the lab manual.

HOMEWORK

This course uses MasteringChemistry® an online homework system. Students will need to register and answer the homework assignments on the internet. The purpose of the homework is to gain knowledge of the material by working through the problems. The answers are secondary and the process is most important. It is understood that you will put a great deal of effort into completing the homework. There is typically a strong correlation between the time spent on the homework problems and the grade earned in the class.

EXAMINATIONS

Each student is required to bring their own SCANTRON 882 for each exam. Each exam will consist of approximately 30 multiple choice questions based upon definitions, concepts, and fundamental calculations. Exam problems are based on the lab write-ups, homework, lecture and reading. Extra time will not be allowed for the exams.

COMPREHENSIVE FINAL EXAM

The exam used will be the American Chemical Society standardized final. The examination is comprehensive. A minimum of 66 % of the final exam is based on the previous exams. The balance of the final exam may be based on laboratory calculations, homework, and text examples.

CALCULATORS

The TI-30x is highly recommended. All calculators with formula access will not be allowed during exams.

MAKE-UP EXAMS

There will be no make-up exams offered. If you miss an exam and have a signed medical excuse and have informed your instructor prior to the exam, some arrangements may be made.

ATTENDANCE

Your success in this course is dependent in part on your regular attendance. If you are unable to make it to class on time please enter the class sit quietly.

BLACKBOARD

Blackboard is used extensively in this course. Students are required to have a valid e-mail address. Students are responsible for monitoring their Blackboard account for announcements, schedule changes, and other communication with the instructor.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

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 American with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

CHEMISTRY 1A SYLLABUS – Tentative Course Schedule

Week	Dates	Content in Lecture	Content in Lab
1	8/14 8/16	CH 1 Matter, Measurement, and Problem Solving (1.1-1.5) CH 1 Matter, Measurement, and Problem Solving (1.6-1.8)	Pre-Semester/Equipment Quiz Syllabus and MasteringChemistry Unit 1: Introduction to Laboratory Safety and Checkout (Safety Quiz)
2	8/21 8/23	CH 2 Atoms and Elements (2.0-2.7) CH 2 Atoms and Elements (2.8-2.9)	Unit 2: Mixtures and Pure Substances Unit 3: Measurement
3	8/28 8/30	CH 3 Molecules, Compounds, and Chemical Equations (3.0-3.6) Exam 1(CH 1, 2, 3.0-3.6)	Unit 4: Nomenclature and Gravimetric Analysis Handout: Nomenclature Worksheet
4	9/4 9/6	CH 3 Molecules, Compounds, and Chemical Equations (3.7-3.11) CH 4 Chemical Quantities and Aqueous Reactions (4.1-4.3)	Unit 7: The Mole Lab Quiz 1: Unit 1,2,3,4,7, Safety/ Nomenclature/Equipment
5	9/11 9/13	CH 4 Chemical Quantities and Aqueous Reactions (4.4-4.7) CH 4 Chemical Quantities and Aqueous Reactions (4.8-4.9)	Handout: Balancing Reactions Worksheet Handout: Empirical Formulas-Oxide of Tin and Worksheet
6	9/18 9/20	CH 18 Electrochemistry (18.1-18.2) CH 5 Gases (5.1-5.3)	Unit 8: The Formula of a Hydrate Unit 5: Double Displacement Reactions
7	9/25 9/27	CH 5 Gases (5.4-5.6) CH 5 Gases (5.7-5.11)	Unit 9: Stoichiometry Unit 10: Alum Crystallization. Recycling of Aluminum Cans
8	10/2 10/4	Exam 2 (CH 3.7-3.11, 4, 5) CH 6 Thermochemistry (6.1-6.5)	Unit 15: Redox Reactions – The Burning of Magnesium Lab Quiz 2: Unit 5,8,9,10, Balancing and Empirical Formulas
9	10/9 10/11	CH 6 Thermochemistry (6.6-6.10) CH 7 The Quantum-Mechanical Model of the Atom (7.0-7.6)	Unit 16: Formation of a Simple Salt and Complex Ions Unit 21: Charles' Law
10	10/16 10/18	CH 8 Periodic Properties of the Elements (8.0-8.6) CH 8 Periodic Properties of the Elements (8.7-8.9)	Unit 22: Molecular Mass of a Volatile Liquid Unit 23: Atomic Mass of an Unknown Divalent Metal Unit
11	10/23 10/25	CH 9 Chemical Bonding I: Lewis Theory (9.0-9.6) CH 9 Chemical Bonding I: Lewis Theory (9.7-9.11)	Unit 27: Heat Flow. Calorimetry Handout: Thermodynamics Worksheet
12	10/30 11/1	Exam 3 (CH 6, 7, 8, 9) CH 10 Chemical Bonding II (10.1-10.4)	Unit 13: Acids and Bases Lab Quiz 3: Unit 16, 21, 22, 23, 27, and Thermodynamics
13	11/6 11/8	CH 10 Chemical Bonding II (10.5-10.6) CH 10 Chemical Bonding II (10.7-10.8)	Unit 19: Vitamin C in Fruit Juices Unit 17: Percent Iron (II) in an Unknown
14	11/13 11/15	CH 11 Liquids, Solids, and Intermolecular Forces (11.1-11.4) CH 11 Liquids, Solids, and Intermolecular Forces (11.5-11.9)	Handout: Titration Practical Exam Unit 28: Molecular Geometry I
15	11/20	CH 11 Liquids, Solids, and Intermolecular Forces (11.9-11.13)	Unit 28: Molecular Geometry II

	11/22	Thanksgiving Break	Thanksgiving Break
16	11/27 11/29	CH 12 Solutions Exam 4 (CH 10, 11, 12)	Unit 14: Buffers and Antacids Unit 11: Properties of Solutions
17	12/4 12/6	Final Exam Review (CH 1,2,3,4,5,6) Final Exam Review (CH 7,8,9,10,11,12)	Lab Quiz 4: Unit 19, 17, 28, and Titration Unit 30: Freezing Point Depression
18	12/11	Final Exam (4:00-5:50pm)	

IMPORTANT DATES

August 24, 2012 Drop Date for a Refund September 3, 2012 Drop Date to Avoid a "W" October 12, 2012 Drop Date for a "W"	September 14, 2012 Change to Pass/No Pass December 11, 2012 Final Exam (4:00-5:50pm)
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SPECIAL NOTES

- The schedule is tentative and may be changed if deemed necessary by the instructor. Assignments and specific assignment instructions and dates are subject to change if deemed necessary by the instructor. Notice of any changes will be given either verbal or written notice either individually or as a group. This may include a notice given on Blackboard. It is the responsibility of each student to be present in class when the announcement is made and to check Blackboard frequently. An absence from class does not constitute an excuse for not knowing what has transpired in class.
- Students are expected to be in class during all scheduled meeting times. Student athletes and class field trip participants need to notify your instructor about their schedule well in advance.
- If a student chooses to withdraw from the course, it is the responsibility of each student to complete the proper procedure for withdrawal. Do not depend on your instructor to drop you from the course.
- Class participation counts as part of the overall class grade. It is the responsibility of each student to sign the attendance sheet at the start of each class meeting. Students who do not sign the attendance sheet will be counted as absent. Any student that leaves class before the end of the class session will be counted as absent.
- Late work is not accepted. Any work (homework, lab work, or study guides) will receive a score of a zero if turned in after the due date.
- All written assignments must contain the proper grammar, punctuation, and mechanics.
- No student work will be accepted written in red ink.
- All students will confer with the instructor if there are any problems or concerns. The instructor will be available to conference with students after each class and during office hours.
- All cellular phones, beepers, pagers, MP3 players, and iPods must be turned off while in class session and lab time. Earphones are not allowed in students ears. You may not text during class. The use of these devices will result in the student being counted absent.
- The instructor may not be recorded during lecture time without the consent of the instructor.
- Sunglasses must be removed during class sessions. Hats must be removed during exams.
- Conversations between students are not permitted while the instructor is lecturing. On repeated incidences, the student(s) will be asked to leave and he/she will be counted as absent.
- "Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences." (FCC Course Catalogue)
- Homework will be assigned through the online program MasteringChemistry.com.
- All assignments must include the students first and last name and section number. Assignments that have multiple pages must be stapled together.
- Students will maintain a respectful tone towards the instructor and other students. Students who are disrespectful and/or belligerent and/or disruptive will be removed from the class for a minimum of two class sessions and counted absent for both, as well as the session in which the student was asked to leave early.
- The instructor has the right to assign seating.

18. Students are encouraged to ask questions. You should be prepared to have the question answered with another question.

CHEMISTRY 1A SYLLABUS

LAB SAFETY CHEM 1A

Safety is everyone's business.

Conduct yourself in a responsible and mature manner at all times in the laboratory.

Preparation is key to safety: come prepared to lab.

ATTIRE

- You are required to **wear splash goggles** at all times in the lab when experiments are conducted. You only have one pair of eyes, and people have lost their eyesight partially or even totally due to accidents with chemicals.
- You are required to **wear a lab coat** at all times in the lab when experiments are conducted. This is a safety code, NOT a dress code; you need to protect your body from any possible chemical spills.
 - Your body needs to be entirely covered: shorts, and skirts (which expose thighs) are not allowed at all times in the lab.
 - Your feet need to be entirely covered: flip-flops, any open toed shoes or uncovered heels are not allowed in the lab.
 - Hair longer than shoulder length needs to be appropriately tied back.
 - You should not wear dangling jewelry or any loose, baggy garments, scarves, as to avoid undesired unplanned contact with any chemicals.
- Use of ipods and the like are not allowed during lab. Loud music is distracting. Earphones prevent you from being aware of your environment.

CONDUCT

- There is absolutely no eating, drinking, chewing or applying make up in lab. Even water! Chemicals can be accidentally ingested or absorbed through your skin. Do not use glassware as containers for foods or beverage. You are allowed to quickly step outside for drinking. However make sure you do not leave any experimental work unattended.
- Avoid contaminating yourself. Wash your hands before handling food, gum, cigarettes make up, etc. Do not touch your face and eyes before washing your hands.
- Note the locations of the fire extinguishers, fire blankets, fire alarms, safety showers, eyewash fountains and first aid kits.
- Keep aisles and corridor clear. Access to exits and emergency equipment must be unobstructed.
- Unauthorized experiments are prohibited. Perform only the assigned experiments, during regular hours and with adequate equipment and supervision.
- Clean your bench (with detergent), rinse and wipe dry your bench at the end of the experiment. Clean any common areas: fume hoods, balances' area, sinks' area, etc. Return all chemicals, and apparatus and equipment in clean and working order to their proper locations. If something is not working, please inform the instructor so that it can be repaired.
- Chemical wastes need to be discarded properly, in labeled waste containers kept in the fume hoods. Never dispose of chemicals in the sinks.
- Do not throw anything (chemicals, towel paper, matches, etc) in the sinks.
- Never walk away from a reaction. Watch it carefully at all times no matter how slowly it seems to be proceeding.

HANDLING GLASSWARE

- Dispose of broken glassware in appropriate broken glass waste container, not in a regular trashcan. Use a brush and dustpan to clean up broken glassware. Never use your bare hand.
- Examine glassware before each use. Never use chipped, cracked or dirty glassware.
- Use great care in inserting glass tubing / thermometers into rubber stoppers. Use glycerin when inserting glass tubing or thermometers into stoppers. Do not hold the stopper in the palm of your hand, but between your thumb and forefinger. Rotate the tube while pushing it gently into the hole, with an even pressure.
- If you do not understand how to use a piece of glassware / equipment, ask the instructor for help.

HEATING SUBSTANCES

- Never leave a lit heat source unattended. Turn off burners or hot plates when not in use.
- Do not use a burner around a flammable liquid, but rather a hot plate. Handle flammable compounds in a fume hood. When using a fume hood, the hood door needs to be aligned with the red sash lines on said hood.
- Beware: hot glassware looks like cold glassware! Remove hot glassware with tongs or a hot pad. Do not use a cold pad and do not set a heated piece of glassware on a cold surface as the hot glassware may crack.
- When heating a substance in a test tube, be careful not to point the open part of the test tube towards anyone. The contents of the test tube might be ejected suddenly, like a geyser, causing burns or worse. Preferably heat the sides not the bottom of the test tube.

HANDLING CHEMICALS

- All chemicals in the laboratory are to be considered dangerous.
- Do not taste anything in the laboratory, chemicals or not. Non-chemicals might be contaminated with hazardous materials.
- Do not smell any chemicals directly. Generally avoid smelling things from concentrated sources in the laboratory. If directed to do so, smell things with care: hold the container at arm lengths, fan the vapors toward your nostrils by sweeping your hand over the top of the container.
- Do not pipette by mouth: use a pipette bulb instead, to avoid possible chemical ingestion.
- Avoid wasting chemicals. Obtain only quantities of chemicals and solutions needed for the experiment. You will need to properly discard of any excess reagents.
- Never return excess material to their original containers. Unused samples in vials should be returned at the end of lab period as is. Do not contaminate any stock containers.
- If a stopper or solid reagent seems stuck in a bottle, see the instructor for help.
- Handle bottles by their labels, so that any drips will be on the side away from the label and also not be on the next person's hand. Clean any reagent spills immediately to protect everyone.
- Acids must be handled with extreme care. When diluting acids always add acid to water slowly with periodic swirling. If you add too much acid during too little time, intense heat will be produced which can cause an explosion.
- Never remove chemicals or other materials from the laboratory area.

CHEMICAL SPILLS AND CONTAMINATION

- Any spills need to be cleaned immediately! Dry solid materials (unless posing a specific hazard) can be swept into a dustpan, which will be passed on to the instructor or to the lab technician.
- Spilled acids and bases need to be neutralized, respectively, with sodium bicarbonate or citric acid, and then discarded down the drain by flushing with excess water.
- If you get any chemical in your eyes or on your skin, immediately flush the area with water in the eyewash station or in the sink / safety shower for at least 15 minutes. Then seek medical attention.
- For any burns, cuts, exposure to corrosive chemicals, inhalation of fumes go to the nurse for treatment. You need to know which chemicals were used to help medical staff to give you an appropriate medical treatment.
- Report any accident or injury to the instructor immediately.

SPECIAL NOTES

- Students having a medical condition such as, but not limited to hypo- or hyperglycemia, diabetes, epilepsy, heart ailments, or any other medical condition that may cause sudden loss of consciousness, should consult their physician and if any accommodations are needed then they should provide the instructor with written directions from their physician.
- The effects of chemical agents used in this course on human pregnancy are unknown. Pregnant women should consult their physician and if any accommodations are needed then they should provide the instructor with written directions from their physician.

I, _____, have read and agreed to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to insure my own safety as well as the safety of others. I am aware that any violation of this safety contract or misbehavior on my part may result in being my removed from the laboratory, receiving a failing grade, and / or dismissal from the course.