

CASPER COLLEGE COURSE SYLLABUS
CHEM 1006 – Basic Chemistry Laboratory I

Semester/Year: Fall 2015

Lecture Hours: 0

Lab Hours: 3

Credit Hours: 1

Class Time: Sec. 1 8:00-10:50,
Sec. 2 13:00-15:50 (1:00-3:50
PM), Sec. 3 13:00-15:50 (1:00-
3:50 PM), Sec. 4 8:00-10:50.

Days: Tuesday, Thursday,
Monday, and Thursday
(respectively for each section
listed)

Room: PS 304

Instructor's Name: Mark Mehn, Ph.D.

**Instructor's Contact
Information:** PS311

Office Phone: (307) 268-2370

Email:
mmehn@caspercollege.edu

Office Hours: Mondays, Wednesdays, Fridays from 10:00-10:50, Tuesdays from 12:00-12:50, and Thursdays from 13:00-14:50 (1:00-2:50 PM) or by appointment.

Course Description: Elementary chemical laboratory practice demonstrating the applications of chemical theory. This laboratory includes experiments on density, changes of state, physical and chemical properties, percent composition of hydrates, elementary qualitative analysis, chemical reactions, and empirical formulas. Not recommended for students who plan to take [CHEM 1025](#) or [CHEM 1035](#). Concurrent enrollment or credit in [CHEM 1005](#) is required. (Taken with [CHEM 1005](#), equivalent to UW CHEM 1000.)

Statement of Prerequisites: must be taken concurrently with (or following) CHEM 1005.

Goal: This lab seeks to: (i) demonstrate practical laboratory techniques and requisite calculations through the completion of several fundamental chemistry experiments (ii) instill proficiency in techniques including measurements of mass, length, temperature, and volume, (iii) prepare you for identification of several unknowns by various methods, and calculation of quantities such as density, specific heat, etc.

Outcomes: The following Casper College General Education outcomes may apply to this course:

1. Use the scientific method
2. Solve problems using critical thinking and creativity
3. Use quantitative analytical skills to evaluate and process numerical data

Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work used for these assessments.

Course Objectives: Upon successful completion of this course, students will:

- 1) be aware of basic safety and emergency procedures when performing chemistry experiments.
- 2) be trained in the proper procedures for performing experiments, and in the proper handling and use of chemical reagents, glassware, equipment, and balances.
- 3) understand the concepts of Basic Chemistry that the laboratory experiments are meant to illustrate and reinforce.

Methodology: Lab experiments will be performed, typically preceded by a discussion of salient points of the experiment for the day, as well as safety information for working with the particular substances involved in that laboratory experiment. Moodle will also be used to deliver announcements and other content. Moodle Mail is an official means of communication for this class. Changes are made each semester as a result of student feedback, so please complete your course evaluations at the end of the course. Your feedback is valued. The instructor uses course evaluations in determining course methodology.

Evaluation Criteria:

- Ten REPORTS (90 pts per report). A complete Lab Report consists of two parts:
 - o Exercises. These may include questions to be answered, calculations, graphs, chemical equations to be balanced or completed, etc. The exercises are due with your report, *unless otherwise required by your instructor.*
 - o Results and Discussion. These may include qualitative and quantitative data, calculations, chemical equations, etc. The reports are to be completed in class, and submitted at the end of lab (i.e. on the same day), *unless otherwise required by your instructor.*

These pages will be collected, graded and returned during the next lab period. Missed experiments can only be made up on the discretion of your instructor. The lowest scoring Report will be dropped, so only 9 will be counted toward your score.

- A MIDTERM EXAM (100 pts) covering the first four experiments, and a FINAL EXAM (100 pts) covering the last six experiments. These will be part practical (skill based) and part theoretical (write). **Missed exams can only be made up on the discretion of your instructor.**
- There is no EXTRA CREDIT offered in this course for any reason.

<u>POINT DISTRIBUTION</u>	<u>Your Scores</u>	<u>GRADING SCALE</u>
Reports (800 pts): 80%	max. 810 pts	A: 900-1010 pts
MidTerm Exam (100 pts): 10%	max. 100 pts	B: 800-899 pts
Final Exam (100 pts): 10%	max. 100 pts	C: 700-799 pts
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Required Text, Readings, and Materials: Instructor generated handouts. These will be available through the Moodle4Me shell. Please let the instructor know if you need help accessing these files.

Class Policies/Last Date to Change to Audit Status or to Withdraw with a W Grade:

- Participation is not optional. Absolutely no ‘dry labs’ will be accepted in this course.
- By registering for, and staying in, this class, you agree to (i) abide by the policies, and (ii) fulfil all the requirements, described in this syllabus. Your instructor reserves the right to make revisions and modifications to this syllabus as needed, subject to sufficient notice to the class of such changes. You are responsible for all announcements (verbal or written), tests, as well as changes in the schedule, whether or not you are in class. Absence neither excuses you from responsibility, nor entitles you to special opportunities or extra notification.
- Your instructor will give you complete information on safety equipment (e.g. safety glasses required, but provided. Lab coat recommended), safety procedures (safe handling of glass, flame, chemicals, etc.), and waste disposal. You are required to obey all instructions issued by your instructor- for your own safety and comfort. You are required to dispose of waste chemicals in the manner prescribed by your instructor. Unless you are told it is safe to dispose of chemicals in the wastebaskets or down the drain, please do not do so.
- Do not miss any labs! Due to the weight of lab performance (80%), each unexcused missed lab can typically drop your grade by one level (i.e., A to B, B to C, etc.)

- ❑ Your instructor reserves the right to initiate a faculty initiated withdraw (FIW) after two continuous weeks of absence (two meetings), and a retention alert (RA) at his discretion.
- ❑ Come to class on time. Coming late *can be* disruptive, and *is* disrespectful to your classmates and instructor. Your instructor reserves the right to deny attendance sign-up to latecomers.
- ❑ Your instructor has office hours, an email address, and a phone- please make use of them. Your tests will be returned and discussed, typically within two meetings after the test. You may discuss your test results and grade with your instructor during office hours.
- ❑ Please, turn the ringer OFF on your cell phone/pager when you are in class and NO texting while working in lab. This is a courtesy to your classmates and instructor and is for your safety and the safety of those around you. **Possible exemptions include: you are a firefighter, EMT, the parent of a child for whom you must be available, or waiting for an emergency call. If so, keep your phones on vibrate and step outside the classroom to take the call. You must inform your instructor on a per-meeting basis about your potential incoming call. Text Messaging during class is extremely rude, and will not be allowed at any time. Your instructor reserves the right to take appropriate action if this policy is flagrantly violated.**
- ❑ The last day for withdrawal from the course (assigning a grade of W) is 12th Nov., 2015.

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head (Dr. Eric Mechalke), the interim Dean of the School of Science (Dr. Grant Wilson), and lastly the Interim Vice President for Academic Affairs (Dr. Shawn Powell).

Academic Dishonesty: (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Moodle Mail will be used regularly and is also considered an official means of communication. Students are responsible for checking their accounts regularly. This is also where you will find course evaluation links during course evaluation periods.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Calendar:

Date	Experiment	Title
24, 25, and 27 Aug. 2015	Locker Check-In, Policies, Syllabus, Lab 1	Measurements
31 Aug., 2, and 4 Sept. 2015	2	Density
7, 8, and 10 Sept. 2015	Labor Day	---No Lab---
14, 15, and 17 Sept. 2015	3	Separation of Mixtures
21, 22, and 24 Sept. 2015	4	Thermochemistry
28, 29 Sept., and 1 Oct. 2015	5	Determining Empirical Formulas
5, 6, and 8 Oct. 2015	MidTerm Exam	-----
12, 13, and 15 Oct. 2015	6	Classifying Chemical Reactions
19, 20 and 22 Oct. 2015	Fall Break	---No Lab---
26, 27, and 29 Oct. 2015	7	Oxidation-Reduction Reactions
2, 3, and 5 Nov. 2015	8	Double Exchange Reactions
9, 10, and 12 Nov. 2015	9	Stoichiometry of a Reaction
16, 17, and 19 Nov. 2015	10	Flame Tests & Atomic Spectra
23, 24, and 26 Nov. 2015	Thanksgiving Break	---No Lab---
30 Nov., 1, and 3 Dec. 2015	Lab Final and Locker Check-Out	-----
7, 8, and 10 Dec. 2015	Optional 11 ^a	Lewis Structures

^a Lab 11 is an Optional Experiment (to be performed outside of Lab class and submitted no later than Friday December 11th, 2015 at 5 PM to PS 311 - Dr. Mehn's Office). It will be used to replace the lowest scoring of 9 experiments (after dropping the lowest of 10 performed).

As the instructor, I reserve the right to alter the contents of this syllabus. All revisions will be delivered either verbally in class or in writing (via either your Casper College or Moodle Mail email account).