

CASPER COLLEGE COURSE SYLLABUS
Chem 1028 – Chemistry Laboratory I

Semester/Year: Fall 2015

Lecture Hours: 0

Lab Hours: 3

Credit Hours: 1

Class Time: Section 05 13:00-
15:50 (1:00-3:50 PM)

Days: Wednesday

Room: PS 301

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

**Instructor's Contact
Information:** PS 311

Office Phone: (307) 268-2370

Email:
mmehn@caspercollege.edu

Office Hours: Mondays, Wednesdays, and 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: Introductory chemistry laboratory used to introduce the student to laboratory equipment and technique and to demonstrate some of the chemical laws discussed in [CHEM 1025](#). ([CHEM 1025](#) with CHEM 1028 are equivalent to UW CHEM 1020.)

Statement of Prerequisites: must be taken concurrently with (or following) CHEM 1025.

Goal: This lab teaches practical laboratory techniques and requisite calculations through completion of several fundamental chemistry experiments and post laboratory problems. Desired outcomes in students include proficiency in lab techniques (including measurements of mass, length, and volume) and computational ability in determination of physical quantities such as density, molar mass, molar volume, molecular formulas and empirical formulas.

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; and
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: Students are expected to develop their critical thinking skills and powers of observation, take measurements, identify sources of bias and errors, and become more proficient in solving numerical problems.

Methodology: Lab experiments will be performed, typically preceded by a discussion of salient points of the experiment for the day, as well as a review of the experiment from the previous meeting. Moodle4Me will also be used to deliver announcements and lab instructions. Moodle 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 semester. Your feedback is valuable as the instructor uses course evaluations in determining course methodology.

Evaluation Criteria:

- ❑ Ten LABORATORY REPORTS and Lab PROBLEM SETS (75 pts each). The correct format for these reports will be discussed separately from this syllabus. All reports are due at the end of each lab period.
- ❑ Missed experiments can only be made up upon the discretion of your instructor. No missed lab reports or questions sets will be accepted unless the entire experiment (including actual experimental work) is made up. Absolutely no ‘dry labs’ (i.e. turning in a report without participation in the laboratory exercise) will be allowed. This is considered academic dishonesty.
- ❑ A MIDTERM EXAM (125 pts) covering the first five experiments and a FINAL EXAM (125 pts) covering the last five experiments will be given. These exams may involve both practical (i.e., skill based components) and computational questions. These cannot be made up if missed.
- ❑ There is no EXTRA CREDIT offered in this course for any reason.

| <i>POINT DISTRIBUTION</i> | <i>GRADING SCALE</i> |
|--------------------------------------|-----------------------------|
| Lab Reports (750 pts): 75% | A: 900 – 1000 pts |
| MidTerm Exam (125 pts): 12.5% | B: 800-899 pts |
| Final Exam (125 pts): 12.5% | C: 700-799 pts |
| | D: 600-699 pt |

Required Text, Readings, and Materials: See Moodle4Me Shell for pdf’s of individual laboratory exercises. Please, print your lab for the day prior to coming to lab.

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

- ❑ 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), 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 do not do so.
- ❑ Your instructor reserves the right to initiate a faculty initiated withdraw (FIW) after two continuous weeks of absence (two lab meetings), and a retention alert (RA) at his discretion.
- ❑ Come to class on time as safety information is given at the beginning of lab. Coming late **can be** disruptive, and **is** disrespectful to your classmates and instructor. Your instructor reserves the right to deny attendance to latecomers.
- ❑ 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.
- ❑ The last day for withdrawal from the course (assigning a grade of W) is the 12th of November, 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 is also considered an official means of communication. Students are responsible to check 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 |
|----------------------|--|---|
| 24-27 Aug. 2015 | Introduction, Safety, and Lab Check In | |
| 31 Aug.-3 Sept. 2015 | 1 | Measurement, Precision, and Accuracy |
| 7-10 Sept. 2015 | Labor Day Holiday | --- No Lab --- |
| 14-17 Sept. 2015 | 2 | Density and Law(s) of Conservation |
| 21-24 Sept. 2015 | 3 | Law of Definite Composition |
| 28 Sept.-1 Oct. 2015 | 4 | Analysis of an Ionic Compound with an Oxyanion |
| 5-8 Oct. 2015 | 5 | Decomposition of Metal Hydrates |
| 12-15 Oct. 2015 | MidTerm Exam (on Labs 1-5) | ----- |
| 19-22 Oct. 2015 | Fall Break | --- No Lab --- |
| 26-29 Oct. 2015 | 6 | Spectroscopic Determination of the Concentration of a Copper(II) Solution |
| 2-5 Nov. 2015 | 7 | Titration of Acetic Acid with Sodium Hydroxide |
| 9-12 Nov. 2015 | 8 | Enthalpies of Dissolution and Neutralization |
| 16-19 Nov. 2015 | 9 | Emission Spectrum of Hydrogen |
| 23-26 Mar. 2015 | Thanksgiving Break | --- No Lab --- |
| 30 Nov.-3 Dec. 2015 | 10 & Locker Check-out | Lewis Structures and Valence Shell Electron Pair Repulsion |
| 7-10 Dec. 2015 | Lab Final Exam (on Labs 6-10) | ----- |

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 account).