

CASPER COLLEGE COURSE SYLLABUS  
**CHEM 1025 – Chemistry I**

**Semester/Year:** Fall 2015

**Lecture Hours:** 3

**Lab Hours:** 0

**Credit Hours:** 3

**Class Time:** Section 03 12:00-12:50

**Days:** Monday, Wednesday, and Friday with a Problem Solving Session on Thursday

**Room:** PS 317, Problem Solving Session in PS 317

**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, 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:** The first semester of a general course designed to meet the requirements of pre-professional, engineering, science, and liberal arts majors. Covers fundamental principles, atoms, subatomic particles, periodicity of elements, stoichiometry, bonding, oxidation states, states of matter, and solutions. (CHEM 1025 with [CHEM 1028](#) are equivalent to UW CHEM 1020.)

**Statement of Prerequisites:** A 'C' or better in [MATH 0930](#), or an ACT math score of 23 or better. (High school chemistry strongly recommended or a 'C' or better in [CHEM 1005](#))

**Goal:** This course includes basic and applied study of the interactions that govern all chemical phenomena. It emphasizes the relationships of space, time, mass and energy, electromagnetic radiation, macroscopic and microscopic views of matter, chemical transformations, and quantum mechanical principles. This course also introduces the scientific approach, its scope and limitations. Skills involved will include (but will not be limited to) critical thinking, and the ability to analyze qualitative, numerical, and chemical problems.

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

1. Using the scientific method;
2. Solving problems using critical thinking and creativity; and
3. Using 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 be able to:

- Demonstrate basic use of chemical vocabulary
- Identify and classify the components of redox reactions
- Understand solubility of compounds and the fundamental basis for solubility
- Solve problems involving aqueous reactions including identification of acids and bases
- Express the kinetic molecular theory of gases, understand the principles governing gases including the ideal gas law and where real gases deviate from these ideals
- Discuss energy changes involved in chemical reactions
- Express principles governing atomic structure and bonding
- Utilize predictive power of periodic trends
- Draw connections between Lewis structures, VSEPR and molecular shape

- Demonstrate their understanding via solving problems

**Methodology:** Lectures will be delivered using Powerpoint. To help students prepare for class, the Powerpoint slides will be posted as pdf files in the Moodle4Me class shell. Moodle will also be used to deliver announcements and other content. 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 course. Your feedback is valuable as the instructor uses course evaluations in determining course methodology.

**Evaluation Criteria:**

- Three Regular Hour Exams (3 exams x 100 pts/exam = 300 pts). The nature of the course necessitates that each exam be somewhat cumulative. However, each test will focus on the material in that Unit (please see the schedule below). Examinations will be held on the dates listed in the course outline (see below). No notecards or cheat sheets will be allowed for the exams. No hats, MP3 players, iPods, phones with ear pieces, smart watches, Google Glass, or other devices that could be used to replay pre-recorded material or communicate with another person will be allowed during the exam. You are *not* permitted to program any information into your calculator for an exam. No extra time will be given for late arrival. Makeup examinations will be provided only if a student unavoidably misses a scheduled hour examination (for instance, illness with doctor's note, family emergency, etc.). If you know that you will miss an examination (e.g., a college authorized absence), please see me at least a week before the exam to arrange to take the exam early. If you have a University authorized absence and do not alert me until after the exam, then no make-up examination will be provided and a zero will be recorded in the grade book. Please, work with me to ensure an equitable examination for all of your peers. Students are expected to review the grading of their exams and request re-grading, if necessary, only during the two weeks following the exam. No re-grading will occur after this time period and requests for regarding after that time will be ignored.
- Comprehensive Two Hour Final Exam (200 pts). The registrar has already posted the tentative final exam times.

***Section 03 (Meets MWF at 12:00-12:50) Final on Thursday 16<sup>th</sup> December from 13:00-15:00 (1:00-3:00 pm).***

- Nine of Eleven Regular Quizzes (9 quizzes x 10 pts/quiz = 90 pts). These are administered roughly on a weekly basis either in class or electronically through the Moodle shell. They will focus on the most recent material and may not be announced in advance.
- Nine of Eleven Regular Mastering Chemistry Exercises (9 exercises x 10 pts/exercise = 90 pts). These are administered through the Mastering Chemistry site. The course ID for fall 2015 is MCMEHN40450
- Attendance (20 pts total). Percentage will be based on signing the attendance sheets throughout the semester.
- There is no EXTRA CREDIT offered in this course for any reason

<b><u>POINT DISTRIBUTION</u></b>	<b><u>Your Scores</u></b>	<b><u>GRADING SCALE</u></b>
3 Hour Exams (300 pts): <b>42.8%</b>	max. 300 pts	A: 630-700 pts
Final Exam (200 pts): <b>28.8%</b>	max. 200 pts	B: 560-629 pts
Quizzes (90 pts): <b>12.8%</b>	max. 90 pts	C: 490-559 pts
Mastering Chem. (90 pts): <b>12.8%</b>	max. 90 pts	D: 420-489 pts
Attendance (20 pts): <b>2.8%</b>	max. 20 pts	---

**Required Text, Readings, and Materials: Chemistry: The Central Science, 13<sup>th</sup> Ed.,** by Brown, LeMay, Bursten, Murphy, and Woodward.

**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 and posted on Moodle), homework exercises, quizzes, and exams, 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.
- Review sessions will not be held during class time. Also, your instructor has office hours, an email address, and a phone – please, make use of them. Your exams 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.
- Attendance will be checked using a sign-up sheet passed around at the beginning of class. 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.
- Laptops are allowed in class, but please keep to the course material. If you must ‘surf,’ during class do so in the back row and do not disrupt the learning of your classmates. If you are being disruptive, the instructor reserves the right to ask you to leave without accommodation for the material missed during that class meeting.
- Your instructor reserves the right to initiate a retention alert (RA) after three consecutive no-shows and a faculty initiated withdraw (FIW) after two continuous weeks of absence (six meetings).
- Please, turn the ringer OFF on your cell phone/pager when you are in class and NO texting. 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 the 12<sup>th</sup> 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](mailto: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:**

<b>Week</b>	<b>Week Beginning</b>	<b>Chapter</b>	<b>Chapter Contents</b>
1	24 Aug., 2015	1 and 2	Matter and Measurement
2	31 Aug., 2015	2	Atoms, Molecules and Ions
3	7 Sept., 2015	3	Stoichiometry
4	14 Sept., 2015	3	Stoichiometry
-	-	-	<b>18 Sept., 2015 FIRST HOUR EXAMINATION</b>
5	21 Sept., 2015	4	Reactions in Aqueous Solution
6	28 Sept., 2015	4 and 5	Thermochemistry
7	5 Oct., 2015	5	Thermochemistry
-	-	-	<b>10 Oct., 2015 SECOND HOUR EXAMINATION</b>
8	12 Oct., 2015	6	Electron Structure of Atoms
9	19 Oct., 2015	7	Electronic Structure of Atoms
10	26 Oct., 2015	7 and 8	Periodic Properties of the Elements
11	2 Nov., 2015	8	Basic Concepts of Chemical Bonding
-	-	-	<b>7 Nov., 2015 THIRD HOUR EXAMINATION</b>
12	9 Nov., 2015	8	Basic Concepts of Chemical Bonding
13	16 Nov., 2015	9	Molecular Geometry and Bonding Theories
	23 Nov., 2015	9	Molecular Geometry and Bonding Theories
14	30 Nov., 2015	9 and 10	Molecular Geometry and Bonding Theories and Gases
15	7 Dec., 2015	10	Gases
-	-	-	<b>16 Dec., 2015 from 1-3 PM FINAL EXAMINATION</b>

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).

I, the undersigned, confirm that I have received, read, and understand my duties and responsibilities as stated in the syllabus for CHEM 1025 (in Section 3), for the Fall semester of the 2015-2016 academic year.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please print your name here: \_\_\_\_\_

Please also use the bottom half of this page to convey any other information you would like the instructor to know at the outset of this course. (For instance, student activities that may lead to College Excused Absences, allergies to certain substances (e.g., peanuts or sulfites), history of seizures that may endanger yourself or others, etc.) This information will be kept for one semester beyond your completion of the course and then shredded or in some other way destroyed.

Tell me about yourself! Is there anything you want me to know about you (memorable, unique, concerns, etc.).

Any Previous Chemistry Experience:

Any Previous Math Experience:

Any questions for me?

**[NOTE: COMPLETING and TURNING THIS PAGE IN gives you 10pts for Quiz 01!]**