



Course Information

- CHEM 101-001 – Intro to General Chemistry
- 29 September – 12 December 2014
- Lab: Students should be enrolled in one of the 4 lab sections...
- 4 credits of Natural Science, Mathematical and Informational Sciences in General Education

Instructor

- Colby Heideman
- BH 303J
- cheideman@eou.edu
- Office Phone: 541.962.3321

Course Description

- Prerequisites: MATH 095 (or equivalent, can be taken concurrently).
- This course is a general introduction to chemistry, designed for students without previous chemistry experience. Topics that will be covered include: dimensional analysis, atomic structure, stoichiometry, the periodic table and chemical bonding, structure of matter, and solutions,
 - Laboratory work will cover: proper equipment use, obtaining measurements using specific methods, collection and manipulation of data, and overall illustration of chemical principles.

Required Materials

- **General, Organic, and Biochemistry, 7th edition**, by Denniston, Topping, and Caret (earlier versions are also acceptable). For used and cheaper versions check chegg.com.
 - Lab Packet – obtained from the bookstore
 - Safety Goggles: Purchase from Chem Club if you do not own a pair.
 - Calculator: This is essential for homework problems and exams. All students must own and be able to operate a basic calculator.
 - Graphing/programmable calculators will be permitted (Cell phone calculators, ipods, tablets, laptops, etc. will **not** be permitted).

Learning Outcomes

-Three general learning outcomes will be addressed in this course: critical thinking, inquiry, and content knowledge.

- 1) Students will develop both problem solving and critical thinking skills, and they will use these skills to solve problems utilizing chemical principles.

- 2) Students will learn and apply the method of inquiry used by chemists to solve chemical problems.

- 3) Students will gain an appreciation of the scientific discipline of chemistry and the principles used by chemists to solve complex problems.

Grading Criteria

- 2-1 hr. exams = $100 \times 2 = 200$ points

- 1 final exam = $150 \times 1 = 150$ points

- 5 HW assignments = $5 \times 20 = 100$ points

- 9 Labs = $9 \times 15 = 135$ points

- Number grades for the class will be determined by the point total accumulated from the 585 possible points.

-*Extra credit opportunities may also become available – any extra credit will be announced in class and posted in Blackboard (your first extra credit opportunity is to make an appointment with your instructor for personal introductions)

-Grading scale:

% of total points	Letter Grade
100 – 90	A
87 – 89	B+
84 – 86	B
83 – 80	B-
79 – 77	C+
76 – 74	C
73 – 70	C-
69 – 67	D+
66 – 64	D
63 – 60	D-
>60	F

Assessment

-Learning outcome #1: Students will be required to demonstrate their problem solving and critical thinking skills. They will also be required to apply chemical principles to solve certain problems. Students will be assessed based on their performance on two mid-term exams and homework assignments (CRITICAL THINKING, CONTENT KNOWLEDGE).

-Learning outcome #2: Students will be required to apply the scientific method in the laboratory. They will also gain an appreciation and understanding of some of the techniques utilized by chemists in the laboratory to gain understanding. They will be assessed based on their performance in the laboratory, specifically their ability to apply the scientific method and execute laboratory techniques to answer questions (INQUIRY, CONTENT KNOWLEDGE).

-Learning outcome #3: Students will be required to demonstrate their overall content knowledge based on a cumulative final examination (CONTENT KNOWLEDGE).

Exams

- Exam questions involve quantitative calculations, problem solving, fill-in the blanks, multiple choice and short answer definitions and descriptions.
- Content of exam questions will draw heavily on homework problems and lecture.
- Partial credit will be given at the discretion of the grader.
- The final exam will be cumulative. You are expected to know everything that was covered in class or in the text for the sections that we discuss.
- Please bring photo ID to the exams.
- Bring a calculator.
- **No make-up exams will be given!**
- **You may not take out or use any cell phone, ipod or similar device during any exam, make sure it is turned off and out of sight.**

Homework

- Homework will be given in class and on Blackboard. Approximately one week will be given for completion of each assignment. Homework must be turned in by 5:00 pm on the date that it is due.
- Homework makes up a significant portion of your grade, and is good for exam preparation, do it!
- Students are encouraged to work together; however, each student must turn in their own unique homework answers.
- Late homework will not be accepted. Answers that are illegible and/or turned in using fragmented sentences with improper grammar will be marked 0.
- Homework answer keys will be posted after all of the assignments have been turned in.

Laboratory Reports

- The lab experiments will be discussed briefly on the Monday prior to lab, so review your lab packet.
- Laboratory Reports will be due following the completion of lab.
- Late reports will not be accepted.
- Laboratory attendance is mandatory. Due to scheduling conflicts, make-up labs cannot be given. Although lab reports make up a relatively small fraction of the total points, failure to complete a lab will result in a point deduction equivalent to missing an exam.
- **All laboratory experiments must be completed for full credit.**
- Laboratory schedule:

Date (week of...)	Laboratory
29 September	Introduction to the lab/Measurement
6 October	Spectroscopy: Quantitative Analysis with Light
13 October	Molecular Geometry
20 October	Inorganic Ions – Onondaga Lake Water
27 October	Gases: Boyle's and Charles' Law
3 November	Freezing Point Depression Measurements
10 November	Solutions
17 November	Factors Affecting Reaction Rate
24 November	No lab/Thanksgiving break
1 December	Acid/Base Properties of Common Household Products (check-out)
8 December	No lab/finals week

General Education Category and Outcomes

- 1) Critical Thinking
- 2) Inquiry
- 3) Content Knowledge

Academic Integrity

- *"I would prefer even to fail with honor than win by cheating..." Sophocles*
- The university's official position: Eastern Oregon University places a high value upon the integrity of its student scholars. Any student found guilty of academic misconduct (including but not limited to, cheating, plagiarism, or theft of an examination or supplies) may be subject to having his/her grade reduced in the course in question, being placed on probation or suspended from the university, or being expelled from the university – or a combination of these (see Student Handbook at: <http://www.eou.edu/saffairs/handbook/honest.html>).

Tutoring

Students with disabilities

- If you have a documented disability or suspect that you have a learning problem and need assistance, please contact the Disability Services Program in Loso Hall 234 (phone – 962-3081).