

JCC Chemistry 141 General Chemistry I
F1 2008 5 credits M,T,W,R 11-11:57 JM 216

Instructor: Dr. Mark E. Ott Phone: 796-8574 E-mail: 141@docott.com Office: JM 234B

Official course blog: <http://docott.com/141> You are responsible for everything posted there!

Office hours: M 8-11a, W 1:30-3:30p, R 8-11a, R 1:30-3:30p ; **Or by appointment**

The best way to get a hold of me is via E-mail, as I check it several times a day. This is best for more complicated questions.

Course Description: This course is required for most sciences, engineering, and pre-professional health majors. Students who are required to take organic chemistry for their major should enroll in CEM 141 during their first semester. Topics include atomic and molecular structure, periodicity, chemical bonding, states of matter, kinetic theory and stoichiometry.

Pre-req: MTH 120 and ENG 085 or pre-req. Recent chemistry (HS or CEM 131) success recommended

Required materials: 'single line' scientific calculator for Monday quizzes. **NO GRAPHING CALCULATORS!**

Text: Chemistry, The Central Science Brown, LeMay, Bursten, 11th Ed. **REQUIRED.**

Academic Dishonesty: *I do not allow any cheating. There will be no leniency on this point. Submitting someone else's work as your own is dishonest and unfair to that person. Penalties are severe **including expulsion**, this is your only warning. The official JCC policy can be found at http://www.jccmi.edu/Administration/deanoffaculty/student_resources.html*

Attendance: No role will be taken in lecture, but attendance is expected. Lab attendance is mandatory. **Missing 2 or more labs will result in an incomplete or failing grade for the course.** The student is responsible for all information presented in lecture and lab.

Monday Quizzes: On or about Thursday of each week, a series of questions will be posted on the course blog for you to work on over the weekend. On Monday, at the beginning of class, you will take a 20-30 point quiz whose questions will come from the set that were posted the Thursday previous. You will always know the point value of the Monday quiz on Thursday. The questions will be slightly changed, but the idea will be the same. There will be more questions on the 'study guide' than on the actual quiz. For example, I might post 50 points 'worth' of questions on Thursday, and then half of those questions will be on the Monday quiz. The material that will be on the Monday quiz can be from any material taught up until that point in the course. There are no 'exams' per se, so the Monday questions may require you to review previous material. If you miss a Monday quiz you may ONCE turn in answers to the entire question set posted on Thursday and it will be graded out of the total possible points on the Monday quiz. If you miss a second Monday quiz, it is a zero.

Wednesday Quizzes: Wednesday quizzes are slightly different. They are only worth 10 points, also given at the beginning of class, and cover material covered in lecture during the previous 2 days lecture material was covered. The Wednesday 10 point quizzes *cannot* be made up, no matter what. After 3 minutes into the lecture period, you will not be given the opportunity to take the quiz.

Study Hints: There is a nice webpage on the JCC Science department page http://www.jccmi.edu/Departments/Science/How_To_Study_Science/ or <http://tinyurl.com/j1gp> with study hints and how to be successful in this and other science classes. It is worth your time to peruse it sooner rather than later.

Tutors: Tutors (plus additional services for academic success) can be accessed by calling 796-8415 or by stopping by the Center for Student Success, Bert Walker Hall Room 125.

Use-Less-Paper: In an effort to reduce the number of trees cut down in the world, the amount of ‘virgin paper’ used in this class will be kept to an absolute minimum. Very few handouts are given in class and lab schedules/information sheets are posted on the course website. The information here should not be printed out if possible. All quiz answers will be written on ‘recycled’ paper, defined as paper with writing from some previous material on one side and blank on the other. This recycled paper (which you can get from the instructor) is to be used whenever written material is to be turned in. (prelab questions and homework for example)

Late Work: You may turn labs up to **36 hours** after it is due. After that, the grade is a zero. Exceptions will be dealt with on a case by case basis and are very rare. Take home quizzes and other ‘homework’ is not taken late.

JCC Associate Degree Outcomes addressed in this course:

ADO 4: Scientific Reasoning: Students will acquire the ability to accurately determine the correct data to obtain for each experiment. This data will be manipulated accordingly.

ADO 7: Critical Thinking: Given a complex multi-step problem involving more than one major concept students will be able to accurately converge the ideas and work through the problem in a logical pattern.

Grading: Approximately every three weeks, grades will be posted on the course blog. It is the student’s responsibility to periodically check the accuracy of the posted scores. *1 week after grades are posted, they can not be changed, so make sure you check often!*

Examinations

~15 ‘Wednesday’ quizzes @ 10 pts = 150

~15 ‘Monday’ quizzes @ 20-30 pts = 375 pts

~10 Homework problem sets @ 10 pts = 100 pts

Lab

12 1 week projects @ 15 pts = 180

Total Points Possible = **~800**

Your final grade will be based on the following percentages, which **MAY** move down, never up:

4.0 : >90.00% 3.5 : 85.00 – 89.99 3.0 : 80.00 – 84.99 2.5 : 75.00 – 79.99

2.0 : 70.00 – 74.99 1.5 : 65.00 – 69.99 1.0 : 60.00 – 64.99

Note: The schedule and procedures in this syllabus are subject to change.

Schedule:

Phase I - Atoms

Chapter 1, Introduction: Matter and measurement

Chapter 5 Thermochemistry sections 5.1-5.3

Chapter 2, Atoms, Molecules, Ions sections 2.1-2.5

Chapter 6 Electron Structure of Atoms

Chapter 7 Periodic Properties of the Elements

Phase II - Molecules

Chapter 2, Atoms, Molecules, Ions sections 2.6-2.9

Chapter 3, Stoichiometry: sections 3.3-3.5

Chapter 8 Basic Concept of Chemical Bonding

Chapter 9 Molecular Geometry and Bonding

Chapter 18 Environmental Chemistry

Phase III – Reactions & Properties

Chapter 3, Stoichiometry sections 3.1, 3.2, 3.6, 3.7

Chapter 5 Thermochemistry sections 5.4-5.8

Chapter 10 Gases

Chapter 4 Aqueous Reactions / Solution Stoichiometry