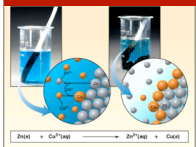


Fall 2006

Fundamentals of Chemistry/Chemistry 131



Course Description and Objectives

The purpose of this course is to introduce students to the basic facts and principles of chemistry. Our approach provides a sound foundation by teaching students that life is a set of chemical reactions that obey laws of chemistry. In lecture, you will learn how to solve conceptual and numerical problems and in the laboratory you will see how and why chemistry is done, hands-on. This course will sharpen students' skills in problem solving and critical thinking.

Instructor

Dr. Tomislav Pintauer

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412-396-1626

347 Mellon Hall

Office Hours: 1-2 pm on Thursdays and Fridays, and by appointment.

Lab Coordinator

Dr. Paul J. Johnson

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327 Mellon Hall

Textbook

“General, Organic, and Biochemistry-Connecting Chemistry to Your Life” by Blei and Odian (2nd edition)

Study Guide

“Study Guide for General, Organic and Biochemistry” by Gillette and Gloffke (2nd edition)

Laboratory Manual

“Fundamentals of Chemistry Laboratory Investigations”, available in bookstore, lab manual is shrink wrapped with a 100 page notebook

Lecture

Monday, Wednesday and Friday

12:00-12:50

Maurice Lecture Hall, Mellon

Thursday

12:15-1:05

Wolf Lecture Hall, Bayer

(Thursday from 6:00-7:30 pm in Pappert Lecture Hall (Bayer) will be used for examinations only)

Lab

Scheduled separately by each student

324 Mellon Hall

A list of experiments you will be doing can be found at the end of this syllabus.

Class Web Site

<http://www.blackboard.duq.edu>

Fundamentals of Chemistry/Chemistry 131 will have a website on blackboard this semester. You are encouraged to check the website regularly because important announcements and materials will be posted. Blackboard will also serve as a gradebook where you can look up your grades throughout the semester. Be sure to check the gradebook regularly to make sure grades were inputted correctly.

How to Login:

Username: your Duquesne username

Password (initial): first letter of your last name, followed by SSN.

Your password should be changed after the first login. To change your password first login to blackboard and then go to blackboard tools/personal settings/ change password.

Examination

For the Fall 2006 semester, two lecture examinations will be given, plus a final examination. Each examination is comprehensive and the final exam is cumulative (covering all material from Chemistry 131). To obtain a passing grade in this course, you must pass both the lecture and laboratory portions of the course. A passing grade in the laboratory is 60 points or better.

Exam 1	140 pts	6:00-7:30 pm, Thursday, October 12, 2006, Pappert Lecture Hall
Exam 2	140 pts	6:00-7:30 pm, Thursday, November 30, 2006, Pappert Lecture Hall
Final Exam	200 pts	8:45-10:45 am, Tuesday, December 19, 2006, Maurice Lecture Hall

Quizzes

A total of 10 quizzes based on lecture material, 10 points each, will be given during class as outlined in the syllabus. The two lowest quiz grades will be dropped, giving a possible total of 80 points. If you miss a quiz due to illness or other factors, it will be one of the quiz grades dropped.

Make-up Policy

If you miss a regularly scheduled exam due to a recognized reason by the university, 140 points will be added to the final exam (i.e. your final exam will have a maximum of 340 points). There is no make up for the final exam. Please mark your calendar and make your travel plans accordingly. There are also no quiz make-ups. The first two quizzes will be dropped (see quiz section above). Any remaining missing quizzes will result in a score of zero. In the event of illness and extraordinary circumstances you must have a doctors note and notify your advisor and myself of the situation within one week of the missed quiz and/or exam.

Homework

You are expected to read the appropriate section of the text before coming to class. Problems will be assigned for homework for each chapter. Completing the homework assignment is crucial in obtaining a solid grasp of the material and you are strongly encouraged to make it a high priority. Homework problems will not be collected or graded. It is your responsibility to ensure that you understand the material tested in the homework problems. You are encouraged to attend my office hours. Students are also strongly encouraged to study in

groups. Homework problems, reading assignments, and lecture material will be the subject to the quizzes and exams.

Grading

Exam 1	140 points
Exam 2	140 points
Quizzes	80 points
Lab	150 points
Final	<u>200 points</u>
	710 points

Grade Distribution

637-710	A
617-636	A-
597-616	B+
564-596	B
545-563	B-
505-544	C+
446-504	C
373-445	D
<373	F

Academic Integrity

Cheating will not be tolerated in lecture or lab. If you are caught cheating, you will receive a grade of F in the course or lab. Please read Articles V and VI of the Duquesne University Code of Student Rights, Responsibilities, and Conduct for procedures in this regard. For detailed information on Bayer School Academic Integrity policy please visit <http://www.science.duq.edu/academicintegrity.htm>.

Tentative Fall Schedule**August***Week 1. The Language of Chemistry (Chapter 1)*

08/28	M	Course Information, Review of Concepts, Start Chapter 1
08/30	W	Chapter 1
08/31	Th	Chapter 1
09/01	F	Chapter 1

September*Week 2. Atomic Structure (Chapter 2)*

09/06	W	Chapter 2
09/07	Th	Quiz 1 (Chapter 1)
09/08	F	Chapter 2
09/11	M	Chapter 2

Week 3. Molecules and Chemical Bonds (Chapter 3)

09/13	W	Chapter 3
09/14	Th	Quiz 2 (Chapter 2)
09/15	F	Chapter 3
09/18	M	Chapter 3

Week 4. Chemical Calculations (Chapter 4)

09/20	W	Chapter 4
09/21	Th	Quiz 3 (Chapter 3)
09/22	F	Chapter 4
09/25	M	Chapter 4

Week 5. Chemical Calculations (Chapter 4)

09/27	W	Chapter 4
09/28	Th	Chapter 4
09/29	F	Chapter 4
10/02	M	Chapter 4

October*Week 6. The Physical Properties of Gases (Chapter 5)*

10/04	W	Chapter 5
10/05	Th	Quiz 4 (Chapter 4)
10/06	F	Chapter 5
10/09	M	Chapter 5

Week 7. Interactions Between Molecules (Chapter 6)

10/11	W	Chapter 6
10/12	Th	No class, EXAM 1: 6:00-7:30 pm Pappert Lecture Hall, Bayer
10/13	F	Chapter 6
10/16	M	Chapter 6

Week 8. Solutions (Chapter 7)

10/18	W	Chapter 7
10/19	Th	Quiz 5 (Chapter 5)
10/20	F	Chapter 7
10/23	M	Chapter 7

Week 9. Solutions (Chapter 7)

10/25	W	Chapter 7
10/26	Th	Quiz 6 (Chapter 6)

10/27 F Chapter 7

11/03 F Chapter 7

November

Week 10. Chemical Reactions (Chapter 8)

11/06 M Chapter 8

11/08 W Chapter 8

11/09 Th Quiz 7 (Chapter 7)

11/10 F Chapter 8

Week 11. Chemical Reactions (Chapter 8)

11/13 M Chapter 8

11/15 W Chapter 8

11/16 Th Quiz 8 (Chapter 8)

11/17 F Chapter 8

Week 12. Acids, Bases and Buffers (Chapter 9)

11/27 M Chapter 9

11/29 W Chapter 9

11/30 Th No class, EXAM 2: 6:00-7:30 pm Pappert Lecture Hall, Bayer

12/01 F Chapter 9

December

Week 13. Chemical and Biological Effects of Radiation (Chapter 10)

12/04 M Chapter 10

12/06 W Chapter 10

12/07 Th Quiz 9 (Chapter 9) and Quiz 10 (Chapter 10)

12/08 F Chapter 10

12/19 Tuesday, FINAL EXAM, 8:45-10:45 am, Maurice Lecture Hall

CHEMISTRY 131 LABORATORY SCHEDULE FALL 2006

Aug. 28,29,31	Orientation and safety video Pick up EXCEL graphing handout
Sept. 5,7	MISC 371 : Intro to graphing : due next week Safety Quiz and Check-In Monday's lab safety quiz, check-in will be next week.
Sept. 11,12,14	Turn in MISC 371 : (5 pts.) Turn in EXCEL Assignment (5 pts.) Do Exp. 1 (MISC 521) : Using Statistics (10 pts.)
Sept. 18,19,21	Exp. 10 : STRC 345 : Visible Atomic Spectrum of Hydrogen (10 Pts.)
Sept. 25,26,28	Exp. 7: STRC 631 : Visualizing Chemical Structures Using Lewis Models and Exp. 8 : Molecular Models. (15 pts.)
Oct. 2,3,5	Exp. 2: Indirect Gravimetric Determination of a Hydrate Compound in a Mixture (10 pts.)
Oct. 9,10,12	Exp. 16: Analysis of Gas Behavior (10 pts.)
Oct. 16,17,19	Exp. 5: Identify Ten Inorganic Compounds by their Inter-Chemical Interactions (10 pts.)
Oct. 30,31 Nov. 2	Exp. 12 : REAC 406 : Writing Chemical equations and Identifying Unknown Solutions (10 Pts.)
Nov. 6,7,9	Exp. 17: Chemical Equilibrium: An Introduction (10 pts.)
Nov. 13,14,16	Anal 902 : Standardization with KHP and Analyzing the Acetic Acid Content of Vinegar (20 pts.)
Nov. 27,28,30	pH and Buffers (10 pts.)
Dec. 4,5,7	Check-Out and Lab Final (25 pts.)

Laboratory Grading

Experiments/Notebooks	125 points
Lab final	25 points

TOTAL	150 points

Attendance in lab is mandatory. You must perform the experiments. If you miss lab, do not turn in a lab report using the data that someone else collected.