

Syllabus Chemistry 1A J. Dekker
Fall 1997 MWF 11:00 am Room SS32

Office: PS 78 # 209.638.3641 ext. 353
Office hours: M 2-3, T and Th 2:30-3.30

Course objectives: Chemistry 1A is a general course in inorganic chemistry designed not only for chemistry majors, but also for biology, physics, chemical engineering, pre-medical and pre-pharmacy professional majors. The course requires a considerable amount of time outside the classroom for studying, reading and homework assignments. The main course objective is to provide the students with a strong background in general chemistry. As a prerequisite students need to have passed the Chem 10 course with at least a C grade or an equivalent High School chemistry course with at least a C grade. Basic scientific math such as Math 20, is the bare minimum you will need to be successful in the Chem 1A class.

Textbooks: -Radel/Navidi Chemistry (2nd ed).
-Sackheim, Chemical Calculations Series B (16th ed).
-Radel/Navidi/Baker(et al) Laboratory Manual to accompany General Chemistry (2nd ed).

Lecture notes: The ability to listen effectively and to take good lecture notes represents an essential college skill. Taking good notes in this class is not only mandatory but also very essential, because most questions on quizzes and exams are derived from the lecture notes.

Laboratory work: The lab will consist of experiments as close and parallel as possible to the material covered in lecture. The student will have to perform all the assigned experiments. 25% of your final grade in this class will come from your lab work. An F grade in the lab means an F in the class. For details please refer to the lab syllabus.

Homework: Homework will be assigned very often, selected problems will be graded. It is crucial to your success in this class that you do your homework with the emphasis on the readings in Radel/Navidi's text and the workbook problems from Sackheim. Homework and popquizzes are counting for 10% towards your final grade.

Attendance: Attendance in lecture and lab is mandatory. The student will be dropped automatically if he/she misses two consecutive lab sessions or four consecutive lectures without prior notification of the instructor. ALWAYS inform the instructor ahead of time if you have to miss a quiz or exam. Without prior notification your grade is a zero for a no show. Tardiness, leaving early, sleeping during class, poor class participation are considered disruptive behavior and will be qualified as an absence.

Quizzes and exams: In lecture there will be four quizzes covering the material of previous lectures. These quizzes will be equally weighted and the average will count towards 25% of your final grade. There will be three exams, two plus a final, each covering more material than a quiz. The exams will be equally weighted and the average will count towards 40% of your final grade.

LECTURE QUIZZES AND EXAMS:

Friday	8/29	Quiz 1	
Friday	9/19	Exam 1	
Wednesday	10/8	Quiz 2	
Friday	10/31	Exam 2	
Friday	11/21	Quiz 3	
Friday	12/5	Quiz 4	
Friday	12/19	Final Exam	10:30 am SS 32.

Drop Date: The drop deadline for this semester is at the end of the ninth week. Friday October 17, 1997 is the last day for you to notify admissions and your lab and lecture instructor, that you want to drop the class, otherwise a letter grade will be assigned and it will have to appear on your transcripts.

Grading: The lowest grade obtained for a lecture quiz will be dropped if you have fulfilled all your homework assignments properly and submitted in time. Additionally, to achieve this incentive your attendance has to be 90%.
Fraudulent behavior during quizzes or exams is graded with a zero. Copying of homework is considered fraudulent behavior for the originator and the copier.

The final grade in the class is determined as follows:

Average of lecture exams	40%
Average of lecture quizzes	25%
Average of homework and popquizzes	10%
Lab work	25%

General grade break-off: A > 90%, B 80-89%, C 70-79%, D 60-69% and F < 59%

Lecture topics. Please turn over.

Lecture topics: Each topic takes approximately two weeks.
The chapters mentioned here are referring to the second edition
of Radel/Navidi's textbook.

1. Chemistry and Measurement. Atoms, Molecules and Ions. The Periodic Table. Naming Compounds. Chapters 1 and 2.
2. The Mole Concept. Chemical Reactions, Equations and Stoichiometry. Chapter 3.
3. Solution and Solution Concentration. Mass Percentage and Molarity. Chapter 4.
4. Gases and Their Properties. Chapter 5.
5. Thermochemistry. Chapter 6.
6. Quantum Theory and the Hydrogen Atom. Many-electron Atoms, Electron Configurations and The Periodic Table. The Elements of Group 1A, 2A and 8A. Chapters 7 and 8.
7. The Chemical Bond. Lewis Structures, Dipole Moments and Molecular Geometry. Chapters 9 and 10.
8. Oxidation-Reduction Reactions. Chapter 11.

There will be no lectures and labs on: M 9/1, F 10/10, T 11/11, Th 11/27 and F 11/28.