

SYLLABUS

COURSE OBJECTIVES

- 1.To develop good laboratory technique while observing the application of basic chemical principles, qualitative analysis, and simple quantitative analysis.
- 2.To introduce the basic elements of the statistical approach to experimental data evaluation.

COURSE OUTCOMES

- 1.The students will demonstrate competence in making detailed observations in the laboratory and in the collection and evaluation of experimental data.
- 2.The students will acquire fundamental laboratory and quantitative reasoning skills required in more advanced chemistry and biology courses.

MATERIALS REQUIRED FOR THIS COURSE

All of the following books and supplies are available in the campus bookstore.

Chemistry 111: Chemical Principles Lab Manual, Dr. P. Kistler, Fall 2008 Edition.

Laboratory Notebook, W. H. Freeman and Company.

Scientific hand calculator.

Eye protection - safety glasses or goggles.

Graph paper - 20 squares to the inch.

MEETING TIMES

Laboratories:	all held in room SCI 122				
Section 1	Tuesday	8:00 AM	-	11:00 AM	Dr. Kistler
Section 2	Tuesday	11:45 AM	-	2:45 PM	Mr. Raker
Section 3	Thursday	8:00 AM	-	11:00 AM	Dr. Kistler
Section 4	Thursday	1:00 PM	-	4:00 PM	Mr. Raker
Section 5	Friday	1:00 PM	-	4:00 PM	Ms. Wert
Section 6	Monday	12:30 PM	-	3:30 PM	Mr. Raker
Section 8	Wednesday	12:30 PM	-	3:30 PM	Ms. Meyers
Section 81	Monday	7:00 PM	-	10:00 PM	Ms. Meyers

Dr. Kistler's Office: SC 130; Phone extension 3508.

Office Hours: Dr. Kistler's schedule will be posted on the bulletin board across the hall from her office. She will also accept telephone calls at home before 11:00 PM. Home phone (610) 258-4892. Her e-mail address is pdkistle@cedarcrest.edu.

### GRADING SYSTEM

This is a 1-credit laboratory course. It must be taken concurrently with the CHE 111 lecture course unless the student has already earned credit for the CHE 111 lecture with a grade of C- or higher. The student will receive a separate syllabus for the lecture portion of the course.

The grade for the laboratory portion of the course will be based on performance with respect to three items: the actual experiments, a final exam, and an evaluation by the instructor.

There will be 12 laboratory experiments. Each experiment will be graded separately, based on individual grades for pre-lab questions, report sheets (and graphs), and post-lab questions. The grades for each individual experiment will be averaged to produce a single grade for the experiments. This experiments grade will constitute 80% of the final laboratory grade.

Pre-lab questions cannot be submitted after the start of the laboratory experiment. For any other laboratory material submitted after the due date, a 10% penalty will be deducted from the grade for that experiment.

A laboratory report will NOT be accepted late unless the carbon copy of your laboratory notes were submitted at the end of the period in which the experiment was completed. Lab reports will also NOT be accepted if they are more than 4 weeks late. In addition, no lab reports will be accepted after the student has taken the laboratory final exam.

A comprehensive laboratory final exam will constitute 15% of the final laboratory grade.

The remaining 5% of the final laboratory grade will be assigned by your laboratory instructor based on the student's performance with respect to such attributes as:

- Compliance with laboratory safety rules.
- Competence with respect to laboratory techniques.
- Organization and efficiency when performing experiments.
- General attitude in the laboratory and the degree of cooperation and contribution when performing experiments with a partner.

In summary, the laboratory grade will be computed as follows:

$$0.80(\text{Experiments Average}) + 0.15(\text{Lab Exam}) + \text{Instructor Evaluation} \\ [0 - 5 \%]$$

The final letter grade will be awarded according to the following scale:

93-100%	A	80-82.9%	B-	67-69.9%	D+
90-92.9%	A-	77-79.9%	C+	60-66.9%	D
87-89.9%	B+	73-76.9%	C	Below 60%	F
83-86.9%	B	70-72.9%	C-		

## POLICIES

### Attendance

Attendance in the laboratory is MANDATORY. All twelve experiments must be completed as scheduled and reports submitted when due. If, due to circumstances beyond your control, you are unable to do an experiment at your scheduled time, it may be possible to perform the experiment during some other scheduled laboratory period, preferably while another lab section is carrying out the same experiment. The student should understand that making up missed experiments causes some difficulties, since you may not work in the laboratory alone. Therefore, when a student has missed an experiment, the make-up period must be scheduled in cooperation with the instructor.

You should also make an effort to arrive on time for your lab period. It is essential that you be present for the entire pre-lab lecture. In addition, you must have sufficient time to complete the experiment. For all late arrivals, the instructor will decide if the student may begin the experiment at that time.

### Obtaining Assistance

The instructor will be glad to discuss your concerns at ANY time in which she does not have a previously scheduled commitment. The Instructional Assistants for this course are: Kassie Woodard, Andrea Eberhardt, Christina Matika, and Jennifer Bonetti.

DO NOT HESITATE TO SEEK ASSISTANCE OR ADVICE WHEN YOU NEED IT!

### Obtaining Extra Credit

Since the normally assigned work associated with this course is relatively extensive and should be sufficient for the mastery of the subject matter, the instructor will not provide opportunities for extra credit.

### Honor Philosophy

"The Cedar Crest College Honor Philosophy states that students should uphold community standards for academic and social behavior in order to preserve a learning environment dedicated to personal and academic excellence. Upholding community standards is a matter of personal integrity and honor. Individuals who accept the honor of membership in the Cedar Crest College community of scholars pledge to accept responsibility for their actions in all academic and social situations and for the effect their actions may have on other members of the College community."

The instructor expects each student to abide by the college's honor code. This honor code applies to all activities associated with this course. The student should realize that the honor code is an important aspect of the educational process at Cedar Crest College.

The following statement concerning Classroom Protocol is supported by Cedar Crest College Faculty and Administration:

"Appropriate classroom behavior is implicit in the Cedar Crest College Honor Code. Such behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations, and any other behaviors that might disrupt instruction and/or compromise students' access to their Cedar Crest College education."

Please be sure to turn off all cell phones and pagers during the laboratory period.

Community Standards for Academic Conduct:

"Academic integrity and ethics remain steadfast, withstanding technological change. Cedar Crest College academic standards therefore apply to all academic work, including, but not limited to, handwritten or computer-generated documents, video or audio recordings, and telecommunications.

As a student at Cedar Crest College, each student shall:

- Only submit work which is his/her own.
- Adhere to the rules of acknowledging outside sources, as defined by the instructor, never plagiarizing or misrepresenting intellectual property.
- Neither seek nor receive aid from another student, converse with one another when inappropriate, nor use materials not authorized by the instructor.
- Follow the instructions of the professor in any academic situation or environment, including taking of examinations, laboratory procedures, the preparation of papers, properly and respectfully using College facilities and resources, including library and computing resources to ensure that these resources may be effectively shared by all members of the College community.
- Abide by the Cedar Crest Computer Use Policy.
- If a student perceives a violation of the Academic Standards, he/she will go to their instructor.
- If you are unable to resolve the problem with the instructor, you should go to the chair of the department. If you need further assistance after consultation with the instructor and the chair, you should see the Provost."

It is the instructor's policy to deal with violations of these Standards for Academic Conduct by awarding a grade of 0 for the assignment or examination in question.

### Students with Learning Disabilities

The instructor supports the Cedar Crest College policy regarding learning disabilities as follows:

"Students with documented disabilities who may need academic accommodations should discuss these needs with their professors during the first two weeks of class. Students with disabilities who wish to request accommodations should contact the Advising Center."

### Requirement for Enrolling in Chemistry 112

Completion of the CHE 111 laboratory course with a grade of D or higher is required for enrollment in CHE 112. To be accepted into the Forensic Science concentration, a student must earn at least a C in the CHE 111 laboratory course.

### CHRONOLOGICAL PLAN FOR THE COURSE

The schedule on the following page lists the dates each experiment will be performed for this course. Due to various circumstances, this schedule may be amended during the term.

## Laboratory Experiments Schedule

<u>2008 Date</u>	<u>Laboratory</u>
8/25, 8/26, 8/27, 8/28, or 8/29	Introduction: safety regulations, procedures, math review, and statistics Check-in
9/2, 9/3, 9/4, 9/5, or 9/8	Experiment #1: Determination of Density
9/9, 9/10, 9/11, 9/12, or 9/15,	Experiment #2: Identification of a Chemical Substance Using Its Physical Properties
9/16, 9/17, 9/18, 9/19, or 9/22	Experiment #3: Quantitative Analysis of a and Hydrate Experiment #4: Percentage Composition and Formula of a Compound
9/23, 9/24, 9/25, 9/26, or 9/29	Experiment #5: Flame Tests for Cations and the Qualitative Analysis of Halides
9/30, 10/1, 10/2, 10/3, or 10/6	Experiment #6: Reactions of Inorganic Compounds
10/7, 10/8, 10/9, 10/10, or 10/20	Experiment #7: The Ten Test Tube Mystery
10/15, 10/16, and 10/17	No Labs
10/21, 10/22, 10/23, 10/24, or 10/27	Experiment #8: Preparation of an Iron Oxalate Complex
10/28, 10/29, 10/30, 10/31, or 11/3	Experiment #9: Vinegar Analysis
11/4, 11/5, 11/6, 11/7, or 11/10	Experiment #10: The Reduction of Potassium Permanganate and Its Dependence Upon pH
11/11, 11/12, 11/13, 11/14, or 11/17	Experiment #11: The Geometrical Structure of Molecules
11/18, 11/19, 11/20, 11/21, or 11/24	Experiment #12: Molecular Weight of a Condensable Vapor
11/25	No Labs
12/1, 12/2, 12/3, 12/4, or 12/5	Check-out and Laboratory Exam
12/8	No Labs