

# Chemistry 100

## Laboratory Syllabus

Spring 1997

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### Instructor

**Ms. Harmon**

202 Pierce Hall

784-8341

Office Hours: M 12:30-1:30

T 11:00-12:00

W 1:00-2:00

Th 11:00-2:00

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### *Course Objectives*

**\*\*Chemistry is an experimental science and the laboratory is as important a part of learning chemistry as the lecture. All of the facts and theories given in your chemistry text are the result of laboratory investigations.**

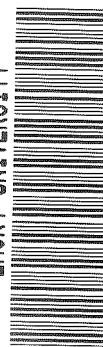
After the completion of this laboratory course, you should be able to:

- 1) Make critical observations involving the composition, properties, and changes in matter.
  - 2) Relate these observations to the theoretical concepts discussed in lecture.
  - 3) Take measurements and use the arithmetic of chemistry to compare these measurements against literature values.
  - 4) Use the physical and chemical properties of substances to separate and analyze them.
  - 5) Apply the scientific method.
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### *Safety Requirements*

- 1) Safety glasses or goggles must be worn at all times in the lab.
  - 2) No shorts or mini-skirts.
  - 3) No sandals or open-toed shoes.
  - 4) Tie back long hair.
  - 5) Never taste anything.
  - 6) Never eat or drink in the laboratory.
  - 7) Never perform unauthorized experiments.
  - 8) Report all injuries to the lab instructor.
  - 9) Attendance at the pre-lab lecture in room 223.
  - 10) Advanced preparation is required.
- \*\*An important part of laboratory safety is *advanced preparation*.**
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### Assignments

1) Pre-lab outline. A pre-lab assignment is required each week. It is simply an outline of the assigned experiment and should be easy to read. You should be able to perform the entire experiment using only the outline. The pre-lab assignment is due before the pre-lab lecture begins and will not be accepted late.

2) Laboratory report sheets and questions. Lab reports are due at the beginning of the pre-lab lecture the week following the lab. These reports are also found in your lab text and accompany each experiment. Lab reports turned in after the pre-lab lecture begins will be counted as one day late.

### Grading

Assignment	Value
Pre-Lab outline	10
Performance of experiment ( accuracy, precision, technique, understanding of the material, ability to follow lab rules, & attitude )	20
Lab reports and questions	70
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Total points per experiment	100

\*\*Late lab reports will lose 5 pts per day (not including weekends and holidays). If a report is turned in so late that those graded reports have been returned, the maximum grade will be 30 pts.

Semester lab grade	
12 exp (100)	1200 pts
Evaluation	100 pts
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Total	1300 pts

\*\*\*Your semester lab grade will be calculated as a percentage of the total points available. Your lab grade will be calculated as 20% your course grade. *A student must pass both the lecture and the laboratory component of the course to receive a passing grade in the course. If either component is failed, the course grade will be an F.*

\*\*\*The evaluation includes such items as attitude, being on time, being prepared, following the safety rules, working efficiently, finishing on time, and leaving the lab clean. Most students can expect to receive an evaluation of 80-85pts. Exceptional students will receive more points, problem students less.

### *Absences*

It is in your best interest not to miss a chemistry lab. Lab class should be considered as you would an exam period. Severe illness or emergency are the only acceptable excuses for missing a lab. **I expect to be notified in advance, prior to your lab class, of any illness or emergency requiring your absence from the lab. If not, you will receive a zero for that lab, no exceptions.**

If one experiment is missed and the excuse is acceptable, the student may make up the experiment during the last week of the semester. Absences beyond one will result in grades of zero. Leaving early for vacation, a doctor's appointment (unless due to an emergency), meetings, etc. are NEVER acceptable excuses for missing a lab. In general, you must arrange your schedule around your lab time, not the other way around.

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### *Honor Policy:*

During a lab class you are encouraged to discuss the experiment with others to promote understanding and exchange ideas. However, your report (including all calculations) is expected to be your own work. Collaboration on the report is a violation of the Oxford College Honor Code and will be treated as such. It is also a violation of the Honor Code to copy any portion of a previous year's report. Your name on your lab report is your pledge that the work is yours.

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### *Financial Responsibility:*

After you have checked in, you will be held financially responsible for all the equipment in your drawer as well as equipment put out for your use. At the end of the semester, when you checkout, you will be required to pay for any damaged or missing items. If you drop this course, you must check out of lab; otherwise a \$5.00 fee will be charged in addition to the cost of any items found missing or damaged.

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### *Advice:*

The best advice I can give you is to come to lab well prepared and always think about what you are doing. If you are not sure about something, ask. Chemicals and glassware can be very dangerous if not handled properly. I hope that you find the chemistry lab to be a fun and rewarding experience.

## Lab Schedule

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Week	Date	Experiment	Title
2	Jan. 20	MLK Holiday	No Lab
3	Jan. 27	Check-in/Exp. 2	Laboratory measurements
4	Feb. 3	Exp. 3	Density determinations
5	Feb. 10	Handout	Chemical bonds and molecular shapes
6	Feb. 17	Handout	Ionic and covalent compounds
7	Feb. 24	Exp. 4	Separation of components in a mixture
8	Mar. 3	Handout	Physical and chemical changes
9	Mar 10	SPRING BREAK	NO LAB!!!!!!
10	Mar. 17	Handouts	Reactions of acids with common substances
11	Mar. 24	Handout	Testing for Anions and Cations
12	Mar. 31	Exp. 8	Chemicals in consumer products
13	Apr. 7	Handout	Preparation of soap and determination of water hardness
14	Apr. 14	Handout	Synthesis of sodium carbonate
15	Apr. 21	Handout(Exp. 19)	Analysis of Vinegar
16	Apr. 28	Check-out Make-up lab	<i>Final Lab Reports Due!!!!</i>