

COURSE SYLLABUS  
CHEM 1011L(01- 05)  
GENERAL CHEMISTRY I LABORATORY

Spring 2010  
1 Credit Hour

Course Sections

Section	Day	Time	Room
01	M	2:00 – 4:50	36-322
02	T	1:15 – 4:05	36-322
03	W	2:00 – 4:50	36-322
04	R	1:15 – 4:05	36-322
05	F	2:00 – 4:50	36-322

Course Instructors

Instructor	Office	Phone	e-mail (@xula.edu)	Office Hours of your Instructor
Dr. Ali, Mehnaaz	36-315	x		
Ms. Beshirs, Megan	36-323	x5718	jbeshirs	
Dr. Kodikara, Chandani	36-305	x5081	ckodikar	
Mr. Luo, Robert	36-309	x5077	rluo	

Course Description: Students are introduced to explorations of chemical and/or physical systems by discovering concepts rather than verifying them. Students who complete this course will be able to identify pertinent variables, recognize qualitative trends in data, determine quantitative relationships and test the validity of conclusions on a particular chemical or physical system. 1011L is a one session per week 3-hour laboratory.

Corequisite: CHEM 1010/1010D

Course Objectives:

- 1) To develop reasoning and problem-solving skills including the ability to identify pertinent variables, recognize qualitative trends in data, determine what, if any, quantitative relationships exist, and test the validity of conclusions.
- 2) To master the basic laboratory skills needed to enter advanced chemistry courses.

Materials Required: General Chemistry Laboratory Manual, 13<sup>th</sup> edition by M. R. Adams, L. R. Allen, J. Bauer, J. W. Carmichael, Jr., S. Henry, J. P. Sevenair, and M. A. Thomson (RED COVER)  
Safety Goggles (Not Glasses) and Laboratory Coat  
Non-programmable Calculator and Ruler

Course Requirements: Attendance is required for all scheduled labs during the time for which the student is scheduled. Attendance records will be kept. It is the general policy that no make-up labs are allowed. In the event of an absence, a student is responsible for doing and turning in the homework which she or he missed. Any student who misses more than 2 labs will receive an automatic grade of FE.

Course Evaluation: Each experiment will be divided into two parts, an in-class portion and an out-of-class or homework portion worth 50 points each for a total of 100 points per experiment. A midterm exam worth 75 points will be given. The final exam is equal in value to two laboratory reports (200 points). The total possible for the semester is **1475** points. See the attached Grade Sheet for a complete point breakdown.

*The in-class portion* will consist of a short quiz at the beginning of class, worth 10 points, which will include nomenclature and questions from previous experiments. The remainder of the in-class points will come from observations made and questions answered in the manual. This portion will be graded by your instructor before you leave the class.

*The homework portion* will consist of exercises that require the student to apply what has been learned during the experiment while using a different set of data. The homework will be due at the **beginning** of the next class session.

*Grading* will be based on the clarity with which you present your data. On the homework, additional attention will be given to spelling and grammar. There will be a penalty of 10 points for each day that a homework assignment is late.

*Laboratory safety* is very important in the lab. **YOU MUST WEAR SAFETY GOGGLES AND A LAB COAT OR APRON AT ALL TIMES IN THE LAB.** Failure to do so carries a penalty of 5 points each time you are in the lab without this protection.

*Clean-up duties* will be assigned on a rotating basis. A list of these assignments is posted in the lab. It is your responsibility to check this list to determine your duties and complete the assignment specified. In addition, you are responsible for making sure that the equipment in your lab drawer is clean at the end of each lab period. Failure to do so carries a penalty of 10 points each time.

*Cheating*, as defined by University policy, will result in an automatic grade of F and possible disciplinary action by the University for **all parties involved**. A more detailed statement regarding academic misconduct can be found on the next page.

*The Final Grade* will be determined as follows:

- A = average between 90% and 100% for all assignments and exams
- B = average between 80% and 89% for all assignments and exams
- C = average between 70% and 79% for all assignments and exams
- D = average between 60% and 69% for all assignments and exams
- F = average below 60% for all assignments and exams

**CELL PHONES, PAGERS, IPODS AND OTHER SIMILAR ELECTRONIC DEVICES ARE NOT ALLOWED IN THE LABORATORY. FAILURE TO COMPLY WITH THIS RULE WILL RESULT IN YOUR REMOVAL FROM THE ROOM.**

**Evacuation Policy:** In the event that classes are cancelled due to a hurricane evacuation, assignments and other course materials will be posted on Blackboard. Students should access the Blackboard site as soon as possible following

the evacuation.

## **Academic Misconduct**

The following statement is found in the Xavier Faculty Handbook:

*If a student's test, examination paper, laboratory report, term paper, or other written assignment gives evidence of not being completely his/her own work, he/she may be given an F for the course. A student who communicates with anyone during the course of an examination or test, unless with the permission of the instructor, may be immediately dismissed from the room and given an F. Such communication includes attempts to read from another's paper. If a student is found to have brought study materials into the examination room without the instructor's permission, it may be assumed that he/she intended to use such materials unlawfully, and he/she may be penalized accordingly.*

Any form of academic misconduct will not be tolerated. Most students have a pretty good idea of what is considered cheating on an exam or quiz. However, many have a hard time distinguishing what is acceptable from what is not acceptable when it comes to writing in-class reports and doing homework in this course. A few things to keep in mind:

- 1) It is never acceptable to falsify lab data. If, while analyzing the results of your experiment, you determine that your data cannot be correct, do not change it! It is expected that you will, on occasion, not successfully perform an experiment and that your data will not be correct. When this is the case you should focus on trying to explain what might have gone wrong.
- 2) Do not use someone else's homework as a guide for how to do your own homework. Your homework **MUST** be your own work. Even if you don't "copy" someone's homework, looking at it to get ideas for writing your own is not acceptable. **YOU MAY NOT WORK ON GRADED HOMEWORK WITH OTHERS!** This includes comparing answers, accessing old homework from students who previously took the course, solving assigned problems together, and other such collaborations. Keep in mind, also, that in such situations the person who allows someone to look at his or her paper or who provides answers to others in some other way is considered equally guilty.

*The faculty member is to report immediately to his/her chair and dean any incident involving academic dishonesty and be prepared to make this report in writing. Written evidence supporting the charge should also be submitted.*

What is acceptable and, in fact, encouraged is the formation of study groups for the purpose of discussing the concepts covered in lab and on homework. Working in pairs or groups to solve problems similar to those assigned for homework is a good way to learn the material. Using this approach, you can often identify concepts with which you are having difficulty, and, with the help of the study group, gain a better understanding of these concepts *before* attempting the homework.

## CHEM 1011 LAB SCHEDULE

Spring 2010

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	<b>January 11</b> Intro./ Nomenclature	12 Intro./ Nomenclature	13 Intro./ Nomenclature	14 Intro./ Nomenclature	15 Intro./ Nomenclature
2	18 <b>MLK Holiday</b>	19 Basic Lab Techniques	20 Basic Lab Techniques	21 Basic Lab Techniques	22 Basic Lab Techniques
3	25 Basic Lab Techniques	26 Unknown NaCl Solution	27 Unknown NaCl Solution	28 Unknown NaCl Solution	29 Unknown NaCl Solution
4	<b>February 1</b> Unknown NaCl Solution	2 Classification of Metal Ions	3 Classification of Metal Ions	4 Classification of Metal Ions	5 Classification of Metal Ions
5	8 Classification of Metal Ions	9 Limiting Reagents	10 Limiting Reagents	11 Limiting Reagents	12 Liming Reagents
6	15 <b>Mardi gras</b>	16 <b>Mardi gras</b>	17 Acids / Bases	18 Acids / Bases	19 Acids / Bases
7	22 Limiting Reagents	23 <b>MIDTERM</b>	24 <b>MIDTERM</b>	25 <b>MIDTERM</b>	26 <b>MIDTERM</b>
8	<b>March 1</b> <b>MIDTERM</b> Acids / Bases	2 Unk. Acid Concentration	3 Unk. Acid Concentration	4 Unk. Acid Concentration	5 Unk. Acid Concentration
9	8 Unk. Acid Concentration	9 Stoichiometry	10 Stoichiometry	11 Stoichiometry	12 Stoichiometry
10	15 Stoichiometry	16 Heat Relation	17 Heat Relation	18 Heat Relation	19 Heat Relation
11	22 Heat Relation	23 Identification of an unk. metal	24 Identification of an unk. metal	25 Identification of an unk. metal	26 Identification of an unk. metal
12	29 <b>Easter Holidays</b>	30 <b>Easter Holidays</b>	31 <b>Easter Holidays</b>	<b>April 1</b> <b>Easter Holidays</b>	2 <b>Easter Holidays</b>
13	5 Identification of an unk. metal	6 Colorimetry	7 Colorimetry	8 Colorimetry	9 Colorimetry
14	12 Colorimetry	13 Phosphate	14 Phosphate	15 Phosphate	16 Phosphate

15	19 Phosphate	20 Acids / Bases	21 <b>Final Exam</b>	22 <b>Final Exam</b>	23 <b>Final Exam</b>
16	26 <b>Final Exam</b>	27 <b>Final Exam</b>			

**GRADE SHEET**

General Chemistry I Lab

CHEM 1011L - \_\_\_\_\_ Spring 2010

Name: \_\_\_\_\_

Instructor: \_\_\_\_\_

<b>Experiment</b>	<b>Quiz</b>	<b>Pre-Lab</b>	<b>In Class</b>	<b>Home-work</b>	<b>Total</b>	<b>Cumulative Total</b>
Introduction to the Chemistry Lab	-----	-----	/50	/50	/100	/100
Basic Laboratory Techniques	/10	-----	/40	/50	/100	/200
Unknown NaCl Solution	/10	-----	/40	/50	/100	/300
Classification of Metal Ions by Chemical Properties	/10	-----	/40	/50	/100	/400
Limiting Reagents and Percent Yield	/10	-----	/40	/50	/100	/500
Acids and Bases	/10	-----	/40	/50	/100	/600
Midterm Exam					/75	/675
<b>Midterm Subtotal (675 Possible)</b>						
Det. of Unknown Acid Conc.	/10	-----	/40	/50	/100	/775
Stoichiometry	/10	/10	/30	/50	/100	/875
Heat Relationships	/10	-----	/40	/50	/100	/975
Identification of an Unk. Metal	/10	-----	/40	/50	/100	/1075
Colorimetry and Solution Making	/10	-----	/40	/50	/100	/1175
Determination of Phosphate in Water	/10	-----	/40	/50	/100	/1275
<b>Final Subtotal (1275 Possible)</b>						
Final Exam					/200	/1475
<b>Total Points (1475 Possible)</b>						
Average						