Chemistry 211
General Chemistry Laboratory II
Spring 2015

Instructor

Dr. Michelle Greene
Office: Neckers 295
Office Hours: by appointment
E-mail: mgreene@chem.siu.edu

Text

Chemistry 211, Lichang Wang (Chemical Education Resources Labs with additions from the Faculty of Southern Illinois University Carbondale)

Course Description

“General Chemistry Laboratory II” is an introductory level chemistry course for science, engineering and pre-professional majors usually taken concurrently with Chemistry 210. The student must have a scientific calculator – the calculator on your cell phone will not suffice for this course.

Course Objectives

The course is designed to meet four major objectives. These are to provide the student with the following tools:
1. An understanding and appreciation for the fundamental concepts of chemistry. The experiments to be performed are listed in Course Content.
2. A logic-based, problem solving approach that can be consistently applied.
3. An understanding of how these fundamental chemical concepts can be applied to everyday life and to current problems of relevance in the world.

Course Policies

The following policies are in effect and failure to abide by these policies can result in your dismissal from the laboratory session and a grade of zero for that particular experiment:
1. No skin can be visible from the chest down. THERE ARE NO EXCEPTIONS TO THIS RULE. A student will be asked to leave and change into the appropriate attire before participating in the lab experiment.
2. You are to wear goggles or safety glasses while anyone in the laboratory is conducting the experiment. Goggles and safety glasses are provided by the Department of Chemistry & Biochemistry.
3. Obey all safety rules described in detail in the laboratory manual and reviewed during the first laboratory session (also included in the syllabus).
4. Teaching Assistants will be treated with respect at all times. Any disrespectful behavior, including refusal to follow your teaching assistant’s instructions or refusal to abide by course policies will result in a minimum penalty of a zero for the experiment.
**Grading**

Your grade for the course will be determined as follows:

<table>
<thead>
<tr>
<th>Experiment Grade</th>
<th>Course Grade</th>
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<tbody>
<tr>
<td>Pre-Laboratory Questions</td>
<td>20%</td>
</tr>
<tr>
<td>Pre-Laboratory Quiz</td>
<td>20%</td>
</tr>
<tr>
<td>Post-Laboratory Report</td>
<td>60%</td>
</tr>
<tr>
<td>Experiments</td>
<td>90%</td>
</tr>
<tr>
<td>Lab Final</td>
<td>10%</td>
</tr>
</tbody>
</table>

Letter grades will be assigned as follows:

- A: 90 – 100%; B: 80 – 89%; C: 70 – 79%; D: 60 – 69%; F: 0 – 59%

This grading policy will be strictly enforced. The lowest of the experiment scores will be dropped when determining your course grade; the lab final CANNOT be dropped. Please note that the university policy regarding incompleted states: An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. In other words, under no circumstances, will an INC be given to a failing student to prevent him or her from receiving an F. Please be advised that the deadline for dropping this course using Salukinet without a grade is Sunday, April 5th, 2015. If you drop Chemistry 211, you must also drop Chemistry 210 and immediately check-in your locker. Failure to check-in will result in a $20 charge.

**Pre-Laboratory Questions:** Pre-laboratory questions must be completed online prior to entering the laboratory; failure to do so will result in a delay or inability to complete the experiment. Academic dishonesty in the form of copying the work of others is not acceptable.

**Pre-Laboratory Quiz:** The first fifteen minutes of class will be dedicated to taking the pre-laboratory quiz. The quizzes will be given as soon as students enter the laboratory. At fifteen minutes after the designated start of laboratory, the quizzes will be collected. No additional quizzes will be given or collected after that time.

**Post-Laboratory Report:** Post-laboratory reports and answers to questions are to be turned in to your teaching assistant before leaving the laboratory session. The only exception to this is if the experiment extends to the end of the period and there is not sufficient time to complete the report. Your teaching assistant will then tell you where and when to turn in the report. Again academic dishonesty in the form of copying the work of others is not acceptable. This policy applies even though you may work on the experiment in groups.

**Experiments**

Most of the experiments will come directly from the laboratory manual. At times other handouts will be required that are not contained in the laboratory manual. Your teaching assistant will distribute these materials when necessary and you will be responsible for completing them as directed.

For some of the experiments you will not be allowed to bring your laboratory manual with you. Instead you will use laboratory guidelines (yellow sheets) and you must prepare sufficiently so that you can do the experiment without referring to the laboratory manual.

Some experiments will require you to use the computer lab to plot and print data. You will need a copy card (available at the student center) to print. The cost for making copies over the semester is minimal.
**Tardiness/Attendance**

If you arrive late for laboratory, you will not be allowed to join a group already performing the experiment. **You will be required to perform all the experimental work by yourself.** If you miss the prelab talk you will only be able to perform the experiment at the discretion of the TA. It is advisable to check the course SIU Online (D2L) website often in order to understand what is expected from you in each experiment. There will be certain experiments that you will be expected to perform without the laboratory manual or assistance from your teaching assistant.

Making up a missed experiment is **NOT** allowed. If extreme circumstances arise that cause a student to miss multiple experiments, the student must meet with the instructor to make arrangements in advance if possible or as soon as possible.

**Preparation Before Attending Lab**

The TA is present to monitor the work and safety of the students in the lab. They are not there to tell you how to do the experiment. What you get out of the laboratory experience depends entirely upon what you put into it. Arriving to the laboratory well-prepared will enable you to have a good educational experience and complete the experiment in a timely manner. Arriving to the laboratory unprepared will likely result in an exercise that is meaningless and frustrating.

If you have any questions about the experiment, you should arrange to meet with your teaching assistant prior to the day your laboratory meets to obtain assistance. **You should not expect to be able to meet with your teaching assistant on the day of the laboratory to get help.**

**Cellular Phones**

Cellular phones must be turned off or in vibrate mode. If you must take an emergency call, please leave the room and do so quietly. Habitual interruptions will not be tolerated.

**Emergency Procedures**

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Your teaching assistant will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. **It is important that you follow these instructions and stay with your teaching assistant during an evacuation or sheltering emergency.** The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

**Conflict Resolution**

Any concerns of conflicts that cannot be resolved with your teaching assistant should be addressed with the course instructor, Dr. Michelle Greene. A meeting will be set up with all involved parties
in order to resolve the conflict. It will be most useful if you make an effort to resolve any conflicts as they arise, as there is little benefit in waiting until the end of the semester.

**Course Content**

<table>
<thead>
<tr>
<th>Week of</th>
<th>Experiment</th>
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<tbody>
<tr>
<td>January 21-24</td>
<td><em>Laboratory Does Not Meet</em></td>
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<tr>
<td>January 26-30</td>
<td>Locker Assignment/Check-in/Safety</td>
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<tr>
<td>February 2-6</td>
<td>Nonsulfide Qualitative Analysis of Cations: Separating and Identifying</td>
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<tr>
<td></td>
<td>Representative Cations from Groups A-E (week 1)</td>
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<tr>
<td>February 9-13</td>
<td>Nonsulfide Qualitative Analysis of Cations: Separating and Identifying</td>
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<tr>
<td></td>
<td>Representative Cations from Groups A-E (week 2)</td>
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<tr>
<td>February 16-20</td>
<td>Freezing Point Depression</td>
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<tr>
<td>February 23-27</td>
<td>Studying the Kinetics of the Solvolysis of 2-Chloro-2- methylpropane</td>
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<tr>
<td>March 2-6</td>
<td><em>Laboratory Does Not Meet</em></td>
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<tr>
<td>March 9-13</td>
<td><em>Laboratory Does Not Meet – Spring Break</em></td>
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<tr>
<td>March 16-20</td>
<td>Rate Law Determination of the Decay of Crystal Violet</td>
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<tr>
<td>March 23-27</td>
<td>Evaluating the Equilibrium Constant for the Reaction of Iron(III) Ion with</td>
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<tr>
<td></td>
<td>Thiocyanate Ion</td>
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<tr>
<td>March 30-April 3</td>
<td>Determining the Equivalent Mass and Dissociation Constant by Titrimetry</td>
</tr>
<tr>
<td>April 6-10</td>
<td><em>Laboratory Does Not Meet</em></td>
</tr>
<tr>
<td>April 13-17</td>
<td>Studying the Effect of Buffering on the Resistance of a Solution to pH Change</td>
</tr>
<tr>
<td>April 20-24</td>
<td>Determination of the Molecular Mass of Lead by Electrolysis</td>
</tr>
<tr>
<td>April 27-May 1</td>
<td>Open laboratory week – Review for Laboratory Final</td>
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<tr>
<td>May 4-8</td>
<td>Laboratory Final/Check Out</td>
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<tr>
<td>May 9-15</td>
<td>Finals Week</td>
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</table>
IMPORTANT DATES *
Semester Class Begins

Last day to add a class (without instructor permission): ..........01/25/2015
Last day to withdraw completely and receive a 100% refund: ..02/01/2015
Last day to drop a course using SalukiNet: ................................04/05/2015
Last day to file diploma application (for name to appear in Commencement program): ............................................................03/13/2015
Final examinations: .................................................................05/11–5/15/2015

Note: For outreach, internet, and short course drop/add dates, visit Registrar’s Academic webpage http://registrar.siu.edu/

SPRING SEMESTER HOLIDAYS
Martin Luther King, Jr.’s Birthday 01/19/2015
Spring Vacation 03/07—03/15/2015

WITHDRAWAL POLICY ~ Undergraduate only
Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit http://registrar.siu.edu/pdf/ugradcatalog1314.pdf

INCOMPLETE POLICY ~ Undergraduate only
An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student's grade point average. For more information please visit: http://registrar.siu.edu/grades/incomplete.html

REPEAT POLICY
An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A,B,C,D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy at http://registrar.siu.edu/pdf/ugradcatalog1314.pdf

GRADUATE POLICIES
Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit http://gradschool.siu.edu/about-us/grad-catalog/index.html

DISABILITY POLICY
Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements. http://disabilityservices.siu.edu/

PLAGIARISM CODE

MORRIS LIBRARY HOURS
http://www.lib.siu.edu/about

SAFETY AWARENESS FACTS AND EDUCATION
Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accounta-bility and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: http://safe.siu.edu

SALUKI CARES
The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or siucares@siu.edu, http://saluki cares.siu.edu/index.html

EMERGENCY PROCEDURES
Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Please reference the Building Emergency Response Protocols for Syllabus attachments on the following pages. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.

INCLUSIVE EXCELLENCE
SIU contains people from all walks of life, from many different cultures and sub-cultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well an essential preparation for any career. For more information please visit: http://www.inclusiveexcellence.siu.edu/

LEARNING AND SUPPORT SERVICES
Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:
Tutoring: http://tutoring.siu.edu/
Math Labs http://tutoring.siu.edu/math_tutoring/index.html

WRITING CENTER
The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit http://write.siu.edu/

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY
Our office’s main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: http://diversity.siu.edu/#

Additional Resources Available:
SALUKINET: https://salukinet.siu.edu/cp/home/displaylogin
ADVISEMENT: http://advisement.siu.edu/
SIU ONLINE: http://online.siu.edu