CHEMISTRY 1440 – General Chemistry II Laboratory
Fall 2019

INSTRUCTOR INFORMATION
Dr. Sophie Kinyanjui
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Phone: 940-369-7134
Office: CHEM 164
Office Hours: MoWeFr: 12:00 noon – 1:00 PM, TuTh 11-12.
If you need to meet outside of normal office hours, please make an appointment.

REQUIRED TEXT
Modern General Chemistry Laboratory: Incorporating Computer-Oriented Data Acquisition and Evaluation Approach into the Student Laboratory Experience, William E. Acree, Jr.

LAB ATTENDANCE
Lab attendance is mandatory. The only way to earn points for a given lab is by actually performing the experiment. You cannot obtain data from someone else and expect to earn points. The only data acceptable is the one you collect yourself during a lab session. Thus, if you miss a lab, you get a zero for it. You may however earn partial credit for doing the online lab quiz associated with that lab.

LAB HANDOUTS
Lab handouts will be available on Canvas for the procedures of the Labs that are not in the Lab Book. Students will be expected to print out the handouts and bring the hard copies to the Lab. You can print FREE at any of the libraries on campus, or in the Chemistry Computer Lab (Chemistry building room 232).

ADDITIONAL MATERIALS REQUIRED: Safety goggles/glasses* worn at all times in the lab, and a scientific calculator. Clothing must be worn in compliance with the Chemistry Department Safety Policy.

LAB RECITATION
This course has a lab recitation/lecture that is solely online in the form of Learning Modules posted on Canvas. Each Learning Module includes a video demonstration on how to set up the laboratory experiment and related safe lab practices, as well as videos of brief tutorials and/or applications relating to the experiment and its concepts. A lab quiz that is part of the grade for this course is also included.

BEFORE LAB EACH WEEK:
Before students can begin lab each week, they must go through the entire module (click every link to see what it contains) and watch related videos, then complete the online learning module and quiz. The worked out examples in the videos help you set up the quiz calculations.

In addition, the TA will check for completion of a step-wise procedure paraphrased from the lab manual (not copied!). Students cannot begin lab without a numerical, step-wise procedure on a separate sheet of paper. Steps must be numbered and legible if handwritten (typed is acceptable; however, see section on plagiarism and academic dishonesty).
LAB QUIZZES

A **Lab quiz is included in each learning module.** Learning Modules will be available all term once posted under Course Content, but **quizzes are only available about 5 days before the lab until 11:59 pm the night BEFORE your lab section time.** If your Lab quiz is not completed by the due date/time, you will receive a **zero** for it. There will be NO make up for the Quizzes.

The link to the video demonstrations for CHEM 1430 playlist (best viewed in 1080p) is https://www.youtube.com/playlist?list=PLZlpfOHyI5T4QiYanDoi5NGjjCQTn9Fh

**TENTATIVE SCHEDULE**

NOTE: This is a tentative class schedule that may be modified, on the basis of the class’ progress during the semester.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Recitation: Check Canvas for announcement</th>
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<tbody>
<tr>
<td>8/26</td>
<td>Lab: No Labs this week</td>
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**9/2**  
**Recitation: Lab 1:** Learning modules on:  
(i) Safety and Lab Check in.  
(ii) Molecular polarity  
In the Lab this week, your TA will go over safety, Lab quizzes, grading scheme, TA’s expectations, as well as Lab Check in. You will need to watch a **mandatory Safety video,** beforehand, at your own time, and turn in the accompanying pay-attention sheet for 10 points extra credit at the beginning of Lab 2 next week. The extra credit will be awarded for **correct answers only,** 0.25 points will be deducted for every incorrect answer until you run out of points. **IT IS NOT A COMPLETION GRADE.** Failure to turn in the Safety pay-attention form will result in non-admittance into any Lab. [A student must be safety trained in order to perform any experiment].  
The Lab TA will also go over **Lab 1: Molecular polarity exercise.** This is a pencil and paper exercise that you are expected to turn in at the next lab meeting. The handouts are available on Blackboard for you to print out. Remember to take **LAB QUIZ 1 by the due date posted on Canvas!**  
*Monday labs will not meet this week due to Labor Day. They will do Lab 1 and 2 activities next week*  

**9/9**  
**Online Lab-Quiz 2:** Due the day before your Lab 2.  
**Lab 2 learning module** on the Solutions Concentrations Experiment [NOT in the Lab manual]. The handout for this experiment is available on Blackboard for easy access. [**You will need to print the handout and bring it to the lab.**]

**9/16**  
**Online Quiz 3:** Due the day before your Lab 3.  
**Lab 3 learning module:** Perform **Experiment 9:** Determination of molar mass by freezing point depression

**9/23**  
**Online Quiz 4:** Due the day before your Lab 4.  
**Lab 4 learning module:** Perform **Experiment 21:** Spectrophotometric determination of an equilibrium constant for complex formation

**9/30**  
**Online Quiz 5:** Due the day before your Lab 5.  
**Lab 5 learning module:** Perform Experiment (Handout): Le’ Chatelier’s principle. [**You will need to print the handout and bring it to the lab.**]
10/7  Online Quiz 6: Due the day before your Lab 6.
   Lab 6 learning module: Perform Experiment 14: Introduction to Acid-Base Chemistry – Determination of acetic acid in vinegar

10/14 Online Quiz 7: Due the day before your Lab 7.
   Lab 7 Learning module: Perform Experiment 15: Introduction to pH – Titration of acetic acid in vinegar and phosphoric acid in Coca-Cola

10/21 Online Quiz 8: Due the day before your Lab 8.
   Lab 8 learning module: Perform Experiment 18: Measuring pH in common acids and bases in household products, and other prepared buffer solutions.

10/28 Online Quiz 9: Due the day before your Lab 9.
   Lab 9 Learning module: Perform Experiment 22: Molar solubility and determination of solubility product

11/4  Online Quiz 10: Due the day before your Lab 10.
   Lab 10 Learning module: Perform Experiment 25: Electrochemistry – Verification of the Nernst equation

11/11 Online Quiz 11: Due the day before your Lab 11.
   Lab 11 learning module: Perform Experiment 13: Chemical Kinetics I – Determination of the order of reaction and rate constant based on differential rate form expression

11/18 Online Quiz 12: Due the day before your Lab 12.
   Lab 12 learning module: Perform Experiment 20: Chemical Kinetics II – Determination of the order of reaction and rate constant based on integral rate form expression

Laboratory reports/data sheets must be turned in within **one week** of when the laboratory experiment is completed.

**GRADING POLICY**

Your grade will be determined by 12 quizzes from lab recitation and your performance in the laboratory (completed laboratory reports and TA assessment of safe laboratory practices). This semester 12 laboratory experiments will be performed. The 300 total points in the laboratory are broken down as follows:

- **12 Laboratory Reports**
  - Points Possible = 12 x 15 = 180

- **Attendance/Punctuality (2 points max.)**
  - Points Possible = 2 x 12 = 24

- **Safety (1.5 points max.)**
  - Points Possible = 1.5 x 12 = 18

- **Clean-up (1.5 points max.)**
  - Points Possible = 1.5 x 12 = 18

- **Quizzes for lab recitation**
  - Points Possible = 12 x 5pts = 60

- **Total points:**
  - = 300

- **Extra credit for Safety video pay-attention form**
  - Points Possible = 10 (Correct answers only)
90 – 100 % of the total points Grade = A
80 – 89 % of the total points Grade = B
70 – 79 % of the total points Grade = C
60 – 69 % of the total points Grade = D
Below 60 % Grade = F

There is **NO** drop lab

**MAKE-UP LABS**

There are **no** make-up laboratories. If you miss a lab due to one of the following five reasons it will be excused. Otherwise, a missed laboratory will result in a zero for that experiment. **Turn in the documentation for the missed laboratory to the TA.**

Acceptable reasons for missing an experiment are:

1. Illness (with physician’s note)
2. Death of a close family member or friend (must provide documentation)
3. Religious holiday (preplanned and cleared with instructor in advance)
4. An official University activity (preplanned and cleared with instructor in advance)
5. Cancellation of classes by the University (this includes inclement weather days or tornado sirens)

For individuals with a single excused absence, the total possible points in the laboratory will be adjusted appropriately to reflect the one excused absence. **For students with more than one excusable absences, please see the Professor in charge.**

Extra credit will be available in the form of completing SPOT online evaluations. Students will send a screen shot of the completed survey page to the TA (not Dr. Kinyanjui) for 5 points by December 1, 2017.

**TAs will enter grades on Canvas in your lab section. It is the responsibility of the student to regularly check for consistency between grades entered on Canvas and grades recorded on physical copies of the laboratory write-up.**

**ATTENDANCE AND CLASSROOM BEHAVIOR**

Attendance is required at scheduled lab hours. Labs will begin as noted on myUNT, so do not be late. If you arrive late, you can not only miss any additional instructions given by the TA, but your group has already begun working, therefore, if you arrive more than 20 minutes late for lab, you may receive a zero for that lab. **Your Lab TA reserves the right to deduct points due to lateness, or even refuse you entry into the Lab.**

Disruptive and/or unsafe behavior will not be tolerated. Cell phones need to be muted during lab. A student engaged in disruptive or unsafe behavior can be asked to leave lab immediately and given a 0 for that lab. Disruptive or unsafe behavior includes, but is not limited to: not listening to the TA, horsing around in the lab, cell phone use (such as texting, playing games, taking phone calls, etc), not wearing safety goggle or glasses when in the lab, etc.

**COMMUNICATION WITH YOUR TA**

You must endeavor to communicate information pertaining to lab absences, lateness, illnesses, official trips, etc in a timely fashion to your Lab TA. In addition, any questions about the lab must be addressed to your TA.
Consequently, it is **VERY IMPORTANT** to make sure that you know the name, email address and the office number of your TA.

**OTHER NOTES**

By university regulations, a grade of “I” (Incomplete) cannot be given as a substitute for a failing grade in a course. Students may pick up a drop slip at the chemistry main office (CHEM 101) or at the registrar and must provide it to the lab recitation instructor of record (Dr. Kinyanjui, not the TA!) by the withdrawal date listed on the university website.

CHEM 1440 is the laboratory course and a separate course from CHEM 1420. Students will receive separate grades for the two courses. Dropping either course does NOT automatically drop you from the other course. (For lab classes, be aware that you should be registered for both the lab lecture course (CHEM 1440.001) and a lab (CHEM 1440.3xx).

**COURSE SAFETY STATEMENT (FOR LABORATORY COURSES)**

Students in the laboratory are urged to use proper safety procedures and guidelines. While working in laboratory sessions, students are expected and required to identify and use proper safety guidelines in all activities requiring lifting, climbing, walking on slippery surfaces, using equipment and tools, handling chemical solutions and hot and cold products. Students should be aware that the University of North Texas is not liable for injuries incurred while students are participating in class activities. All students are encouraged to secure adequate insurance coverage in the event of accidental injury. Students who do not have insurance coverage should consider obtaining Student Health Insurance for this insurance program. Brochures for this insurance are available in the UNT Student Health and Wellness Center on campus. Students who are injured during class activities may seek medical attention at the Student Health and Wellness Center at rates that are reduced compared to other medical facilities. If you have an insurance plan other than Student Health Insurance at UNT, please be sure that your plan covers treatment at this facility. If you choose not to go to the UNT Student Health and Wellness Center, you may be transported to an emergency room at a local hospital. You are responsible for expenses incurred there.

**ACADEMIC DISHONESTY**

Students caught cheating or plagiarizing will receive a "0" for that particular assignment or exam. Additionally, the incident will be reported to the Dean of Students, who may impose further penalty. According to the UNT catalog, the term "cheating" includes, but is not limited to: a. use of any unauthorized assistance in taking quizzes, tests, or examinations; b. dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; c. the acquisition, without permission, of tests or other academic material belonging to a faculty or staff member of the university; d. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s); or e. any other act designed to give a student an unfair advantage. The term "plagiarism" includes, but is not limited to: a. the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment; and b. the knowing or negligent unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials. This also includes copying other students’ data in lab, unless given express permission to do so by the TA; turning in a data sheet for an experiment that you were not physically present for; or copying other students’ words or work for a lab report.
ADA STATEMENT

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at http://disability.unt.edu. You may also contact them by phone at (940) 565-4323.

EMERGENCY NOTIFICATION & PROCEDURES

UNT uses a system called Eagle Alert to quickly notify you with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). The system sends voice messages (and text messages upon permission) to the phones of all active faculty staff, and students. Please make certain to update your phone numbers at http://www.my.unt.edu. Some helpful emergency preparedness actions include: 1) know the evacuation routes and severe weather shelter areas in the buildings where your classes are held, 2) determine how you will contact family and friends if phones are temporarily unavailable, and 3) identify where you will go if you need to evacuate the Denton area suddenly. In the event of a university closure, labs scheduled during that time are excused absences in addition to the one dropped lab.

STUDENT PERCEPTION OF TEACHING (SPOT)

Student feedback is important and an essential part of participation in this course. The Student Perception of Teaching (SPOT) is a requirement for all organized classes at UNT. This short survey will be made available at the end of the semester to provide you with an opportunity to evaluate how this course is taught.

Extra credit: TA may give up to 5 points extra credit for completing the SPOT online evaluation form.

SUCCEED AT UNT

UNT endeavors to offer you a high-quality education and to provide a supportive environment to help you learn and grown. And, as a faculty member, I am committed to helping you be successful as a student. Here’s how to succeed at UNT: Show up. Find Support. Get advised. Be prepared. Get involved. Stay focused. To learn more about campus resources and information on how you can achieve success, go to http://success.unt.edu/