

# CHEMISTRY 1430 – General Chemistry I Laboratory

## Summer 5W1 2019

### INSTRUCTOR INFORMATION

Name: Dr. Charles Browning

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Phone: 940-369-7985

Office: CHEM 276

Office Hours: T 12:30pm-1:30pm

If you need to meet outside of normal office hours, please make an appointment via email.

### 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 for free at any of the libraries on campus, or in the Chemistry Computer Lab (Chemistry building room 232).

**ADDITIONAL MATERIALS REQUIRED:** Safety goggles/glasses (must be 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 will include a video demonstration on how to set up the laboratory experiment and related safe lab practices, brief tutorials or applications relating to the experiment and its concepts, and a **quiz that is part of the grade** for this course.

### BEFORE LAB EACH WEEK:

Before students can begin lab each week, they must read through the entire module and watch related videos, then complete the **online learning module and quiz**. 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).

A Lab quiz is included in each learning module. Learning Modules will be available all semester once posted on Canvas under 'Modules', BUT **Lab quizzes are only available from 5 AM the Monday 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=PLZlpfOHyl5T4QsiYanDoiSNGjjCQTn9Fh>

### TENTATIVE SCHEDULE

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

<b>Date:</b>	<b>Experiment</b>
<b>6/4</b>	<b>Online Quiz 1:</b> Due the day before your Lab 1. <b>Lab 1 learning module:</b> Perform <u>Experiment 1A</u> : Statistical analysis on different types of pennies. <b>You will also be required to sign a safety contract before starting the lab</b> and turn in your Safety Pay-Attention form for extra credit.
<b>6/5</b>	<b>Online Quiz 2:</b> Due the day before Lab 2. <b>Lab 2 learning module:</b> Perform <u>Experiment 2</u> : Physical and chemical properties of liquids.
<b>6/6</b>	<b>Online Quiz 3:</b> Due the day before your Lab 3. <b>Lab 3 learning module:</b> Perform <u>Experiment 6</u> : Density of solids – identification of unknown materials
<b>6/11</b>	<b>Online Quiz 4:</b> Due the day before your Lab 4. <b>Lab 4 learning module:</b> Perform <u>Experiment (Handout)</u> : Atomic Structure: Light, Quantization, and the Hydrogen Atom ( <i>This experiment will be posted on Canvas for you to print and bring to lab.</i> )
<b>6/12</b>	<b>Online Quiz 5:</b> Due the day before your Lab 5. <b>Lab 5 learning module:</b> Perform <u>Experiment (Handout)</u> : Lewis Structures - Formal Charge & Resonance. ( <i>This experiment will be posted on Canvas for you to print and bring to lab.</i> )
<b>6/13</b>	<b>Online Quiz 6:</b> Due the day before your Lab 6. <b>Lab 6 learning module:</b> Perform <u>Experiment (Handout)</u> : Molecular geometry and modelling ( <i>This experiment will be posted on Canvas for you to print and bring to lab.</i> )

- 6/18 Online Quiz 7:** Due the day before your Lab 7.  
**Lab 7 learning module:** Experiment 3A: – Determination of empirical formula and waters of hydration
- 6/19 Online Quiz 8:** Due the day before your Lab 8.  
**Lab 8 Learning module:** Perform Experiment 5: Preparation of Alum
- 6/20 Online Quiz 9:** Due the day before your Lab 9.  
**Lab 9 learning module:** Perform Experiment (Handout): Reactions in aqueous solutions – verification of solubility rules. (*This experiment will be posted on Canvas for you to print and bring to lab.*)
- 6/25 Online Quiz 10:** Due the day before your Lab 10.  
**Lab 10 Learning module:** Experiment 10: Introduction to Calorimetry.
- 6/26 Online Quiz 11:** Due the day before your Lab 11.  
**Lab 11 Learning module:** Perform Experiment 11A: Introduction to Calorimetry II
- 6/27 Online Quiz 12:** Due the day before your Lab 12.  
**Lab 12 Learning module:** Experiment 7: Verification of the ABC gas laws.

Laboratory reports/data sheets must be turned in **the following lab period** 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 = $12 \times 15 = 180$
Attendance/Punctuality (2 points max.)	Points Possible = $2 \times 12 = 24$
Safety during Lab (1.5 points max.)	Points Possible = $1.5 \times 12 = 18$
Clean-up after Lab (1.5 points max.)	Points Possible = $1.5 \times 12 = 18$
Quizzes for lab recitation	<u>Points Possible = <math>12 \times 5\text{pts} = 60</math></u>
<b>Total points:</b>	<b>= 300</b>

Extra credit from Safety pay-attention form	10 points
Extra credit for Spot Evaluation	5 points

Letter grades will be assigned as follows:

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

For individuals with an excused absence, the total possible points in the laboratory will be adjusted appropriately to reflect the one excused absence.

Extra credit will be also available in the form of completing SPOT online evaluations. Students will forward a screen shot of the completed survey page to the TA (not Dr. Browning) for 5 points.

*Teaching Assistants 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.*

### **DROP LABS**

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 Lab TA in advance)
4. An official University activity (preplanned and cleared with Lab TA in advance)
5. Cancellation of classes by the University (this includes inclement weather days or tornado sirens)

### **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 will 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 and may result in being ejected from the Lab class, or even being dropped from the course. Cell phones need to be muted during lab. A student engaged in disruptive or unsafe behavior may be asked to leave lab immediately and be given a zero 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.

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. Browning, not the TA!) by the withdrawal date listed on the university website.

CHEM 1430 is the laboratory course and a separate course from CHEM 1410. 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 1430.001) and a lab (CHEM 1430.3xx).

### **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.

**ODA 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 contact 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/>