CHEM 1451 Chemistry for Health Sciences
Section 500 Online Academic Partnership (AP) Course 15-Week

Instructor: Dr. Seiichiro Tanizaki (Profile URL: https://www.uta.edu/profiles/seiichiro-tanizaki)
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Office Hours: via email, phone (Wednesday from Noon to 1:00 PM Central Time) or by appointment

Course Description: Survey of general, organic, and biochemistry with emphasis on applications to the human body. Measurement, atomic theory and structure, bonding, quantitative relationships in chemical reactions, gases, solutions, electrolytes, organic functional groups and nomenclature, organic reactions, carbohydrates, lipids, proteins, enzymes, metabolism, and nucleic acids.

Required Materials:
1) **The textbook** is "General, Organic and Biological Chemistry (1st edition)" by Seiichiro Tanizaki (2016). The *E*-textbook comes with the online homework system. The hardcopy of the textbook is available at UTA bookstore because some students prefer to read a book on paper rather than on computer. Therefore, purchasing of the hardcopy is not required. The hardcopy of the textbook does not come with an access code to the online homework system.
2) Access to the online homework system. There is no option to purchase the access without the *E*-textbook. The instructions for purchasing access are given under the "**Homework**" section of this syllabus. You must know that when you withdraw from this course or incomplete this course, then you must purchase access again when you re-take this course or complete this course.
3) **The laboratory manual** is available free in the Blackboard course shell as part of course materials.
4) **Laboratory Kit** available at the UT Arlington bookstore is the ONLY accepted lab kit. (**Required, not optional and no exception**). The last page of this syllabus explains how you can purchase the lab kit.
5) **Chemicals:** You must supply chemicals (mostly household items such as salt) and some equipment (household items such as paper towel) by yourself. All chemicals you need for experiments in this course are household items and readily available except two items: **food dye** and **citric acid**. You may not be able to find them in a local grocery store, but can purchase it online. Make sure to order it in advance so that you could complete the experiment by the due date. Extension to the due date will not be allowed.

- You will need a box of assorted primary-color (red, yellow, green and blue) food colors: **Ingredients should contain Yellow 5, Red 40, Blue 1 and Red 3.** You will need it in Week 04. For example, McCormick's Assorted Food Colors and Egg Dye (Red, Yellow, Green and Blue) is acceptable. If you do not use a correct food dye, then your experiment result may not come out correctly and lose credits.
- You will need 100% pure citric acid (typically in solid powder form; DO NOT buy it in liquid form) in Week 06. The minimum amount you need is 10 g.

6) **A scientific calculator with the mathematical logarithmic function**.
7) **Access to a printer and access to a device that can make acceptable digital images** (cell phone app, scanner or copy machine with fax capability, etc.). Scans of lab reports will be uploaded to your course shell for grading. Make sure to use the **PDF** format for submitting your report.

Course Prerequisites: This online course is intended ONLY for students pursuing a career in AP nursing program, and all students should have completed MATH 1301 or MATH 1302 or MATH 1303 or MATH 1322 or MATH 1323 or MATH 1324 or MATH 1421 or MATH 1426 or equivalent. To receive credit for CHEM 1451, you must also be enrolled in CHEM 1451 lab. CHEM 1451 cannot be counted for major credit toward a degree in science or engineering.

Student Learning Outcomes: Upon completing the course, the student should be able to understand major concepts in general, organic and biochemistry. (More detailed learning objectives are given in separate handout available in Blackboard course sites.)
1) (**General Chemistry**) To understand scientific measurement, atomic theory and structure, chemical bonding, quantitative relationship in chemical reactions, and acid-base chemistry.
2) (**Organic Chemistry**) To understand nomenclature, chemical reactions and properties of organic compounds.
3) (**Biochemistry**) To understand molecular structures, chemical reactions and properties of carbohydrates, lipids, and proteins.

Major Assignments and Examinations: In the first week, before you start working on the course assignments, a student must pass the Syllabus Quiz. Failure to pass the quiz may preclude the participation in the graded sections for which a grade is assigned. Fifteen timed-exams (one exam per week) will be given in the Blackboard course shell. You must complete the lab check-in/orientation in the first week and perform seven at-home chemistry experiments and submit pre-lab and post-lab reports to Blackboard which are to be graded by your Coach. Web-based homework problems will be assigned and graded. If you drop or fail CHEM 1451, any grades earned in a previous semester (exams, labs and homework) cannot be carried over when you re-take CHEM 1451. You must complete all exams, lab assignments and homework assignments a new in the current semester.

Grading: The grade in this course will be determined in the following manner.

Grade Category	Category Weight
Exam Average	65%
Homework Average	10%
Lab Average	25%
Total Course Score	**100%**

Each grade category (**Exams**, **Homework**, and **Lab**) is explained in detail later in this syllabus. All numerical grades are calculated by rounding them off to **two decimal places**: If the digit to be removed is less than five, then it is rounded down. If the digit to be removed is equal to or larger than five, then it is rounded up. For example, if your calculated final grade is 89.5649…, then your final grade is rounded to 89.56. Grades will be assigned according to the following scale.

Total Course Score (in %)	90 and above	80 – less than 90	70 – less than 80	60 – less than 70	Below 60
Letter Grade	A	B	C	D	F

Exams: Fifteen exams will be given (One exam per week). These exams will cover the reading assignments (including the-end-of-chapter questions), lecture material, and homework problems. Exams assess your mastery in three fields of chemistry. You will take nine exams on General Chemistry (from Exam 1 to Exam 9), three exams on Organic Chemistry (from Exam 10 to Exam 12) and three exams on Biochemistry (from Exam 13 to Exam 15).

Category	Exams	Category Weight
General Chemistry Exam Average	From Exam 1 to Exam 9	60%
Organic Chemistry Exam Average	From Exam 10 to Exam 12	20%
Biochemistry Exam Average	From Exam 13 to Exam 15	20%

Your exam average is determined from average scores from each category and is calculated by the following formula.

$$\text{Exam Average} = (0.60) \times (\text{Exam Average on General Chemistry}) + (0.20) \times (\text{Exam Average on Organic Chemistry}) + (0.20) \times (\text{Exam Average on Biochemistry})$$

There will be no curving on exams or no extra credit assignments in this course. You cannot exceed the allowed time for an exam. **You must "COMPLETE" the exam by the due date (by noon).**

(**Makeup Exam Policy**) No make-up exams will be given, and any missed exam will result in a grade of zero. However, **two lowest exam scores** will be dropped among nine exam scores on General Chemistry. **One lowest score** will be dropped among three exam scores on Organic Chemistry. **One lowest score** will be dropped among three exam scores on Biochemistry. **This policy covers unforeseen events such as illness, technical computer malfunctions, family emergency, inclement weather, etc.** So, for example, if you missed an exam during the semester, then the zero credit of your missed exam will be dropped. Any zero resulting from Academic Dishonesty is not eligible to be the lowest grade dropped. No extension to the due date will be given.

"I got disconnected while taking the exam. What should I do?"
If you get disconnected during your exam, simply log back on as quickly as you can and resume your exam in progress. Keep in mind that each exam has a timer and the timer will continue to run, even if you get disconnected or log off. If you get disconnected or log off, you are still required to submit your exam before the timer expires. As the makeup exam policy states, the course comes with the policy to cover unforeseen events. So there will be no reset. You are responsible to have a secure and stable internet connection and computer to take this course. You might want to run "Practice Exam" available in Week 01 before you take an actual exam. The score of "Practice Exam" will not affect your course grade. Also, you can use the helpful resources related to test taking available in "Blackboard Resources > Students > Frequently Asked Questions".

"I missed more than four exams because … What is my option?"
The course comes with the makeup exam policy that covers unforeseen events and drops four lowest scores in total. Dropping four lowest scores is equivalent to four weeks of course work or about a third of the semester. A student is expected to be ready to take a course when she/he signs up on the course. I recommend you to talk to your advisor and discuss your option.

"Can I adjust the makeup exam policy? For example, can I drop one lowest score from nine scores on General Chemistry and two lowest scores from three scores on Organic Chemistry?"
No, you cannot. This course requires you to show the mastery in basic topics from three types of chemistry (general chemistry, organic chemistry and biochemistry).

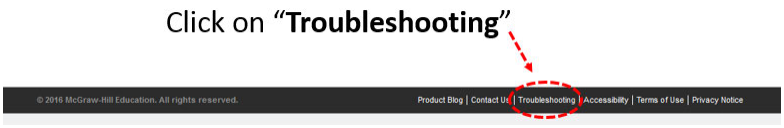
"Do I have to move between questions one by one sequentially?"
No. While taking an exam, click "**Test/Survey Status**" which will then expand. The numbers in the "**Test/Survey Status**" bar correspond to the numbers of questions in the exam. You can move around to different questions by clicking the numbers of questions. DO NOT use the browser "BACK" button, because doing so will cause you to leave the testing platform, and submit a partially-completed test.

"I took the exam. Now what?"
After you take an exam, you should see the score. On Monday following the exam due date, you will be able to review your exam. To review your exam (after Monday following the exam due date): You can click on your numeric grade in your grade book, opening a screen that lists the test. Then you can click on the attempt to see the reviews of the exam.

Homework: Make sure you understand the information about the online homework system given below. If it is not clear, contact me with your questions. Please do not assume anything on the grading policy. **The two lowest scores** will be dropped at the end of the semester. **This policy covers unforeseen events such as illness, technical computer malfunctions, family emergency, inclement weather, etc.** So, for example, if you missed an assignment during the semester, then the zero credit of your missed assignment will be dropped. Any zero resulting from Academic Dishonesty is not eligible to be the lowest grade dropped. No extension to the due date will be given. All due dates for homework assignments are directly available in Blackboard. You will be responsible for checking them and completing them by the due dates.

Homework Registration Instruction
Once you login to the Blackboard course shell (https://elearn.uta.edu), follow the step-by-step instructions below.
Step 1. Click on "**Week 01**" in the course menu on the left side of the screen.
Step 2. Find the assignment "**Homework Week 01 Chapter 1**" in the "**Homework Assignments**" folder. Click on the assignment name.
Step 3. You will be prompted with the page "**Launch McGraw-Hill Link**". Click on "**Launch**" and follow the instructions to register. Once you register, you won't have to sign in to Connect again. Access all the assignment through the Blackboard course shell. **Technical Support:** Call 1-800-331-5094.

First Thing That You Must Do After Registration
After completing the registration, before you work on any assignments, find the link "**Troubleshoot**" at the bottom of the web page. Click on the link.

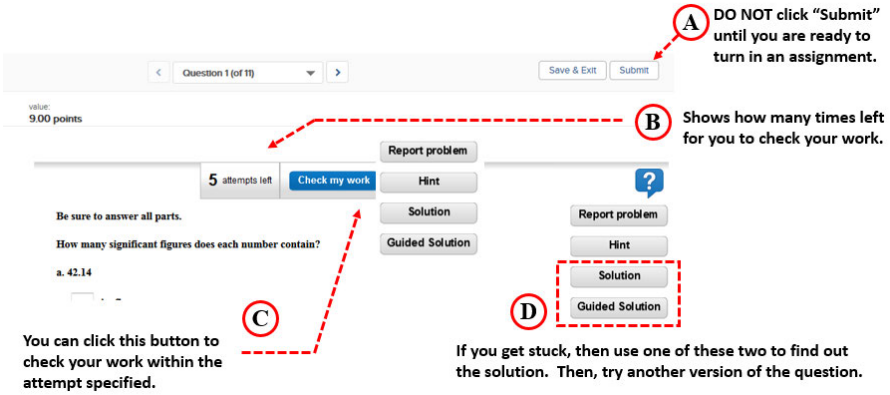


The link will determine if your computer is fully compatible with the homework system. Make sure it is. If not, then contact technical support at 1-800-331-5094.

Homework Grading Policy (See the figure below)

A. DO NOT click on the "Submit" button until you are ready to turn in an assignment. If you submit an assignment, then you must start the entire assignment again with new questions. So be careful. To save your work, use the "**Save &Exit**" button. Remember if you leave an assignment without using the "**Save & Exit**" button and close a session, then all of your work will be lost.
B. For most problems in the assignment, you can have multiple attempts. Each problem shows the number of attempts that you are allowed. You can click on "Hint" without any penalty between attempts. If you exhaust all attempts or give up on a question, then click on "**Solution**" to find out how to solve the question.
C. You can click on the "**Check My Work**" button to check your answer. If there are multiple parts in a question, the button applies to all parts whether or not they are answered. In other words, you cannot check each part of multiple parts in a question at a time.
D. If you need a help on the question, then click on "Solution" or "Guided Solution" and find out the solution. Then, the "**Try another**" button will appear.

Click on "Try another" and complete the question. As long as you answer a new question, you will receive a full credit.



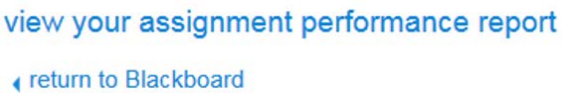
"How many times can I use "Try another" option?"
You can use "Try another" option ten times. Since most of questions allow five attempts, you can try 50 times (= 5 attempts × 10 questions) for each question.

"Where can I get the help for a homework question?"
The online homework system in this course is a self-guided system and comes with solutions and guided solutions to most of questions. If you exhaust all attempts, then read the solution to the question by clicking on "**Solution**" or "**Guided Solution**". Then try another question. As long as you are willing to try, you should be able to receive credits for all questions because there will be no penalty for trying another question. Your Coach will not be able to answer a question related to homework questions.

"I submitted the assignment but I didn't mean to do so. Can you reset my assignment so that I could submit again?"
When you click on the "Submit" button, you will be prompted to confirm your action. If you didn't mean to submit, then simply select "Cancel", and the submission is cancelled. If you accidentally confirm your action, then you must start the entire assignment again.

"I need an extension to the due date because…."
Don't wait until the last minute to do homework because if you experience a personal emergency or internet network problems, or if your computer crashes, it could cause you to miss the deadline. Extensions to due dates will not be allowed when you could not complete your homework because you waited until the last minute. Personal emergencies on the due date do not excuse you from completing assignments. Homework due dates are final and I do not allow extensions for completing homework past the due date in order to be fair to students who complete the assignment on time. However, **the two lowest scores** will be dropped at the end of the semester. **This policy covers unforeseen events such as illness, technical computer malfunctions, family emergency, inclement weather, etc.**

"I submitted the homework assignment, but I don't see the score in my gradebook. Why?"
Blackboard and the online homework system do not communicate the information instantaneously. After the due date, I will synchronize two web sites so that all grades are transferred correctly. Make sure to click on "**view your assignment performance report**" (See the picture below) in the online homework system and verify that you have the score. As long as you have the correct score shown in the online homework system, your grade should be transferred after the due date.



Lab: You must complete the lab check-in/orientation in the first week and perform seven at-home chemistry experiments and submit pre-lab and post-lab reports to Blackboard which are to be graded by your Coach.

1) **You must receive at least a 60% in Lab Average to be eligible to pass the course. In other words, if your final lab average is below 60%, then you will automatically receive F in this course.**
2) The Lab Assignment (Pre-Lab and Post-Lab) is due on the date specified in Blackboard. Each report (Pre-Lab and Post-Lab) is worth 100 points and treated equally toward your lab average. **No lab report will be accepted after the due date.**
3) All work must be original and handwritten. A typed report will not be accepted and receive a zero score.
4) You must be a sole person who performs all experiments and completes all reports during this semester. Group work toward experiments is not allowed in this course.
5) **If you are re-taking this course,** you must repeat all experiments, answer all questions and write all reports this semester. You **CANNOT** recycle any parts of experiments and reports from previous semesters. Recycling them is considered as academic dishonesty in this course and is prosecuted as such because this syllabus states that you must repeat every experiment, answer every question and write every part of reports every semester**. If you are re-taking this course,** you must approach each pre-lab and post-lab question anew every semester: If you simply copy your own solution from a previous semester, DO NOT expect to receive exactly the same grade in this semester: You may receive different scores if undetected errors in your answer are found and/or if grading standards are changed.
6) You will make an image of your report (for example, by using a cell phone app or a scanner). All images must be uploaded to the course website before or on the due date. **Only the PDF format is accepted. A report in other formats will automatically receive a zero grade.**
7) **The two lowest scores** will be dropped at the end of the semester. **This policy covers unforeseen events such as illness, technical computer malfunctions, family emergency, inclement weather, etc.** So, for example, if you missed a report during the semester, then the zero credit of your missed report will be dropped. Any zero resulting from Academic Dishonesty is not eligible to be the lowest grade dropped. No extension to the due date will be given.
8) Do not turn in a report for an experiment which you did not perform yourself. This is considered cheating and will be addressed as such. Do not share any data among other students. Each student must perform an experiment independently. Group experiment work is not allowed, is considered cheating and will be addressed as such.
9) As long as the due date has not passed, you can re-submit a lab report up to five times. If you need more than five times, you must contact me, but you must do so before the due date. It is important to know that when you re-submit a report, you must submit the entire report. **The lab grade is based solely on the last submitted report.**

Lab Safety
All chemicals used in the experiments of this course are household items. You should follow the safety rules specified for each items. Additionally you must follow the guidelines described below. If you violate any of the following guidelines, you may be seriously injured. (1) Goggles, gloves and aprons are **required at all times**. (2) Shoes that cover **the entire foot are required at all times**. (3) Long pants and sleeves are **highly recommended**. (4) Musical or other entertainment devices (include cell phones) **should not be used** when you are performing experiments.

Feedback
A lab report is graded after the due date. The grade and the comments will be available two days after the due date. Although you can turn in a lab report earlier than the due date, it will not be graded or commented until the due date passes.

"How can I check if my lab report is uploaded correctly?"
You will be responsible for uploading a lab report correctly. After submission, by clicking on the link that you used to submit, you should verify that you can view the contents of all files. If you cannot view the file in your Blackboard account, then it means the upload was unsuccessful. So your Coach cannot view it or grade it. However, when you find the icon with the message "This file is being converted. Estimated wait time is …. ", then please refresh the screen by clicking the filename on the right-hand side of the screen. Then the screen will be refreshed and shows you the content of the file if it is uploaded correctly. As long as the due date has not passed, you can re-submit a lab report up to five times. If you need more than five times, you must contact me, but you must do so before the due date. It is important to know that when you re-submit a report, you must submit the "entire" report (not just one missing page for example). **The lab grade is based solely on the last submitted report.**

"When I uploaded files to Blackboard, the order of files changed. Now the file for the second page is listed after the file of the third page. What should I do?"
When you upload your lab reports to the Blackboard, if you have multiple pages, sometimes "Blackboard" will change the (page) order of files that you submit. For example, a file of Page 3 is listed before a file of Page 2. This is fine because Blackboard does this and you cannot change that. This is one of reasons why we ask you to name files according to the rules.

Lab Grading Policy
Your lab report will be graded according to the grading guidelines used in CHEM 1451 from the UTA Department of Chemistry and Biochemistry. (This lab grading policy has been reviewed and approved by the lab coordinator of our department, who is in charge of administering all undergraduate chemistry laboratory courses at UTA.) If you have any questions about our grading policy, please contact Dr. Tanizaki (not your Coach).

In the laboratory portion of this course, one of the major objectives is to learn how to write a scientific lab report correctly so that others can understand the experiment that took place.

When you start an experiment and prepare your lab report, you should always address the following points:

- Record your measurements with the correct number of significant figures and units. You will have points taken off if you do not adhere to this basic practice of writing a scientific report. You cannot write a random number of zeros in a measured number. Remember the following rule of thumb:
    - **Read to the tenth of the smallest printed scale available on an instrument. (On a digital display, write all numbers in display.)**
- All reports must be handwritten. A typed report will not be accepted and you will receive a zero score.
- **You must always show your work.** We are grading how you reached to your conclusions so we must see the steps you took. Also note: if we cannot read your handwriting, we cannot give you points for the question, so please be sure to write legibly.
- If you leave a blank for a question, we cannot give you points for that question.
- Although the textbook definitely helps for understanding an experiment, the "Background" file contains information you need to answer many of pre-lab questions and some of post-lab questions. **You are expected to read the "Background" file before you start each experiment.**
- This laboratory consists of hands-on experiments. **You will be graded on your technical skills for getting the results.** Please take your time and do not rush. If you rush through experiments to finish quickly, you may not obtain an acceptable result. This will be reflected in your lab report and will most likely result in not receiving credit for that experiment. You need to be careful and patient when you perform chemistry experiments.

Your Coach or I can answer questions related to the topics discussed in the "Background" file or if you need to clarify any part of experimental procedures. However, make sure that you understand that we cannot answer your questions about graded questions because they are graded. If we answer a graded question, then there is no point of grading your answer. Plan ahead. **If you wait to perform an experiment right before the due date, you may not be able to complete the experiment.** You need to give yourself enough time to think through all the procedures and perform each experiment in a careful and patient manner.

"What happens if I turn in my report (Pre-Lab report or Post-Lab report) late?"
No report is accepted after the due date. You will receive a zero grade.

Checking Feedback on Your Report
All pre-lab and post-lab reports are graded and include Coach's feedback and comments (for each individual student) which explain why points are taken off and how to improve your reports. To view Coach's comments, follow these steps:
(1) Go to the grade center. (2) Mouse-over the particular assignment which you wish to view. (3) Click the two down-arrows.
(4) Choose to view "Quick Comment"

Your Coach will grade your lab report (Pre-Lab and Post-Lab). If you need further clarification on comments, please first contact your Coach explaining which specific part of the comments you do not understand and ask your Coach to elaborate further.

Disagree with your grade?
If you disagree with your lab grade given by your Coach, please contact me directly. I will review the report. However, you should know that your grade will go down if I find more mistakes.

All students must perform and complete all experiments on their own. Your work must be entirely yours. For example, submitting them as group work or submitting a copy of others' work will be considered scholastic dishonesty. As stated in the syllabus, **students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University.**

Lab Report Grading Rubric

Many questions in a lab report require you to show your work in detail. You must communicate your thought process logically and legibly so that a reader can understand what you write and does not need to guess or assume what's written. Most of writing questions are graded by the following grade rubric (Proficient, Competent, Novice, and Unacceptable).

Proficient (100 % of credits are given.)

The question is answered correctly. The solution logically describes how the final answer is obtained and does not require a reader to guess. Significant figures and units are used correctly throughout the solution.

Competent (Approximately 50% of credits are given.)

The question is answered correctly. However, any one or more of the following are observed in your answer. The solution requires a reader to guess what you write. Significant figures and/or units are not used correctly throughout the solution. Numbers might be rounded off incorrectly. Also, when a question depends on answers from other questions, your answer will be incorrect although the question is solved correctly because incorrect numbers are used. Then, your answer will be graded as "Competent".

Novice (Approximately 20% of credits are given.)

The question is not answered correctly, although the solution describes what the author was trying to communicate.

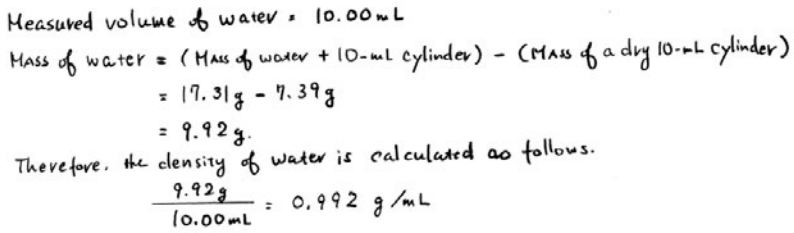
Unacceptable (No credit is given.)

Any one of the following is observed.
1) The question is not answered (The question is left blank.)
2) Only the answer is given and no work is shown.
3) Your writing is not legible.
4) The answer is typed.

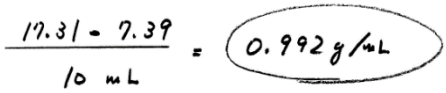
Answers to the following questions are given below to give you concrete examples of the grading rubric.

"Calculate the density of water by using the date you collected in Part B "Density of Water" measurement. Show your all work here."

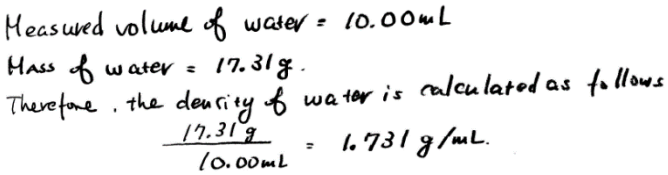
Example of a "Proficient" answer



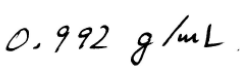
Example of a "Competent" answer: A reader need to guess the numbers used in the text. For example, what does "10 mL" represent? Why are you subtracting two numbers in the numerator? Some units are missing. Number of significant figures are not correctly used. Why are you circling "0.992 g/mL"? Is a reader required to guess that the number circled is your final answer?



Example of a "Novice" answer: Although the work is shown in detail, the question is not answered correctly.



Example of an "Unacceptable" answer: No work is shown when required.



Resources:
1) Academic Coach: In this course, the role of your academic Coach is mostly limited to grade your lab report and make comments on your lab report. Your Coach or I CAN answer questions related to the topics discussed in the "Background" file of each experiment or if you need to clarify any part of experimental procedures. However, make sure that you understand that we CANNOT answer your questions about graded questions because they are graded. Also your Coach will not answer your questions related to homework assignments. Help for homework assignments are given directly in the homework system.
2) See also the "**Student Support Services**" section in this syllabus.

Other Course Policies

Blackboard (Course Shell): This course is an online course. Students are responsible for checking the blackboard course website (https://elearn.uta.edu/) as well as their UTA email (the one ending in "mavs.uta.edu") for correspondence and announcements related to the course. Instructional materials (videos, study guides, and lab manual) are available on the course website.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of **a letter certified** by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:
The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.
Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

Non-Discrimination Policy: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.*

Title IX Policy: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For information regarding Title IX, visit* www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Additional information is available at https://www.uta.edu/conduct/.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit http://www.uta.edu/news/info/campus-carry/

Student Feedback Survey: At the end of each term, students enrolled in face-to-face and online classes categorized as "lecture," "seminar," or "laboratory" are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback via the SFS database is aggregated with that of other students enrolled in the course. Students' anonymity will be protected to the extent that the law allows. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit http://www.uta.edu/sfs.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at http://www.uta.edu/universitycollege/resources/index.php.

Course Schedule:

"As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.–Seiichiro Tanizaki"

Week 01 (Ch. 1)	Jan 16 – Jan 20	**Week 02 (Ch. 1)**	Jan 21 – Jan 27	**Week 03 (Ch. 2)**	Jan 28 – Feb 03
Week 04 (Ch. 3)	Feb 04 – Feb 10	**Week 05 (Ch. 4)**	Feb 11 – Feb 17	**Week 06 (Ch. 4)**	Feb 18 – Feb 24
Week 07 (Ch. 5)	Feb 25 – Mar 03	**Week 08 (Ch. 6)**	Mar 04 – Mar 10	**Week 09 (Ch. 6)**	Mar 11 – Mar 17
Week 10 (Ch. 7)	Mar 18 – Mar 24	**Week 11 (Ch. 7)**	Mar 25 – Mar 31	**Week 12 (Ch. 8)**	Apr 01 – Apr 07
Week 13 (Ch. 9)	Apr 08 – Apr 14	**Week 14 (Ch. 10)**	Apr 15 – Apr 21	**Week 15 (Ch. 11)**	Apr 22 – Apr 28

Important Dates

January 16	Course Start Date
January 27	Census date
March 24	Last day to drop classes: Submit requests to advisor prior to 4:00 pm (CT)
April 28	Course End Date
May 05	Grade Released to Students

General Instruction

- You must pass the **Syllabus Quiz** (The score must be 100%).
- The first week (**Week 01**) last five days. All other weeks (Week 02 – Week 15) lasts for seven days.
- **Know your schedule.** All due dates are on **Friday at noon**. In this course, except the first week, weekends are not placed at the end, but instead they are placed at the start. Due dates will not change according to your schedule. Please make sure to consider, before you decide to take and stay in this course, whether your schedule will meet the course requirement and whether you can handle the due dates.
- **Do not wait** until the last minute to complete homework or an experiment. If you experience computer network problems or if your computer crashes, it could cause you to miss the deadline. **Extensions to due dates will not be allowed when you could not complete your homework because you waited until the last minute.** For example, personal emergencies on the due date do not excuse you from completing assignments.
- Each week has the set of learning objectives and you will take an exam which assesses your mastery on the week's learning objectives. However, keep in mind that learning objectives in chemistry build upon objectives of the previous week. Therefore, you are expected to retain and be able to use skills you mastered previously in order to solve current problems in homework, labs, and exams.
- The subjects of most laboratory experiments are staggered one or two week behind lecture materials so that you can reinforce the materials you learned in lab. However, some topics in laboratory are reserved only for laboratory purposes and they are not discussed in lecture portion because they are learned more effectively in lab. The background information in the lab manual explains them in detail.

For the Blackboard computer-related technical problems, please contact the UTA support team (NOT me or your Coach). The UTA support team can be reached by cdesupport@uta.edu or 817-272-5727 or Toll Free 888-882-2478. You can also post your questions in "Discussion Board". Please make sure to read "Rules for Online Discussion" before you start posting your questions.

Expectations for Out-of-Class Study: This chemistry course is a very intensive course. You must be able to spend the necessary amount of time studying chemistry. For courses on-campus, the rule of thumb for succeeding in Chemistry is three hours of study for every hour of lecture. Since there are 3 hours of lecture per week on campus, this means that at a minimum you should plan to study Chemistry additional 9 hours each week on your own. By adding hours for lab, a total of 15 hours (3 lecture hours, 9 hours of outside study, and 3 lab hours) should be reserved to study chemistry per week. **Similarly, for this online course, you should expect to spend at a minimum about 15 hours per week (about 2 hours per day) studying Chemistry, in order to succeed in this course.**

Before You Start

Before you start, you must pass the Syllabus Quiz. It is mandatory that you pass the quiz: You must earn 100%. Once you pass the quiz, the rest of the course materials (Week 01 – Week 15) will appear (Some of the course materials will appear as the semester progresses). You also need to register to the online homework system to work on Week 01 homework assignments.

Syllabus Quiz
Read the contents of the syllabus carefully. After reading the syllabus, take the Syllabus Quiz. You MUST receive 100% to pass the quiz to move on in this course. You can take the quiz as many times as you need until you receive the 100% score. **Please remember that each course has its own course policy. It is your responsibility to familiarize yourself with the policies for this course.**

Week 01

Reading Assignments and Lecture Slideshows
Read Chapter 1 Measurements (Section 1 – Section 3). In Section 3, read the contents related to "Units" and "Matric Prefixes".
Practice the-end-of-chapter questions from Question 1 to Question 7 of Chapter 1. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 01 Chapter 1.

Experiment
Upload the Lab Week 01 Report (Check-in and Orientation).

Exam
Take Exam 1: The exam covers objectives for Week01.

Make sure to obtain the CHEM 1451 Lab Kit from UT Arlington Bookstore: There are several fragile items in your lab kit such as thermometer, hydrometer, glass stirring rod and small test tube. You do not want to find out that items are broken at the last minute. The lab kit should contain a document listing all items. **If anything is missing or broken,** contact the UT Arlington bookstore immediately. Do this in the first week of the semester so that you will be able to complete an experiment by its due date. Failure to do so may cause you to miss the deadline if you find a broken item at the last minute. No extension to the due date will be given because you didn't check all items!

Week 02

Reading Assignments and Lecture Slideshows
Read Chapter 1 Measurements (Section 3 – Section 7). In Section 3, read the contents related to "Unit Conversion" and "Dosage Calculation".
Practice the-end-of-chapter questions from Question 8 to Question 14 of Chapter 1. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 02 Chapter 1.

Experiment
Read the background information and the procedure and perform the experiment, recording the data.
Upload the Lab Week 02 Report (The Prelab/Data Report of "Measurements").

Exam
Take Exam 2: The exam covers objectives for Week 02.

Week 03

Reading Assignments and Lecture Slideshows
Read Chapter 2 Atoms (All Sections).
Practice all of the-end-of-chapter questions of Chapter 2. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 03 Chapter 2.

Experiment
Complete and upload the Lab Week 03 Report (The Postlab Report of "Measurements").

Exam
Take Exam 3: The exam covers objectives for Week 03.

Week 04

Reading Assignments and Lecture Slideshows
Read Chapter 3 Molecules, Ions, and Ionic Compounds (All Sections).
Practice all of the-end-of-chapter questions of Chapter 3. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 04 Chapter 3.

Experiment
Read the background information and the procedure and perform the experiment, recording the data.
Upload the Lab Week 04 Report (The Prelab/Data Report of "Paper Chromatography").

Exam
Take Exam 4: The exam covers objectives for Week 04.

Week 05

Reading Assignments and Lecture Slideshows
Read Chapter 4 Chemical Reactions (Section 1 – Section 3).
Practice the-end-of-chapter questions from Question 1 to Question 6 of Chapter 4. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 05 Chapter 4.

Experiment
Complete and upload the Lab Week 05 Report (The Postlab Report of "Paper Chromatography").

Exam
Take Exam 5: The exam covers objectives for Week 05.

Week 06

Reading Assignments and Lecture Slideshows
Read Chapter 4 Chemical Reactions (Section 4 and Section 5)
Practice the-end-of-chapter questions from Question 7 to Question 8 of Chapter 4. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 06 Chapter 4

Experiment
Read the background information and the procedure and perform the experiment, recording the data.
Upload the Lab Week 06 Report (The Prelab/Data Report of "Chemical Reactions").

Exam
Take Exam 6: The exam covers objectives for Week 06.

Week 07

Reading Assignments and Lecture Slideshows
Red Chapter 5 Solutions (All Sections).
Practice all of the-end-of-chapter questions of Chapter 5. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 07 Chapter 5.

Experiment
Complete and upload the Lab Week 07 Report (The Postlab Report of "Chemical Reactions").

Exam
Take Exam 7: The exam covers objectives for Week 07.

Week 08

Reading Assignments and Lecture Slideshows
Read Chapter 6 Acids and Bases (Section 1 – Section 3).
Practice the-end-of-chapter questions from Question 1 to Question 11 of Chapter 6. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 08 Chapter 6.

Experiment
Read the background information and the procedure and perform the experiment, recording the data.
Upload the Lab Week 08 Report (The Prelab/Data Report of "Colligative Properties").

Exam
Take Exam 8: The exam covers objectives for Week 08.

Week 09

Reading Assignments and Lecture Slideshows
Read Chapter 6 Acids and Bases (Section 4 – Section 6).
Practice the-end-of-chapter questions from Question 12 to Question 16 of Chapter 6. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 09 Chapter 6.

Experiment
Complete and upload the Lab Week 09 Report (The Postlab Report of "Colligative Properties").

Exam
Take Exam 9: The exam covers objectives for Week 09.
Exam Average on General Chemistry is determined after dropping two lowest scores from Exam 1 to Exam 9.

Week 10

Reading Assignments and Lecture Slideshows
Read Chapter 7 Organic Chemistry Part One (Section 1 – Section 3).
Practice the-end-of-chapter questions from Question 1 to Question 6 of Chapter 7. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 10 Chapter 7.

Experiment
Read the background information and the procedure and perform the experiment, recording the data.
Upload the Lab Week 10 Report (The Prelab/Data Report of "Acid and Base").

Exam
Take Exam 10: The exam covers objectives for Week 10.

Week 11

Reading Assignments and Lecture Slideshows
Read Chapter 7 Organic Chemistry Part One (Section 4 – Section 7).
Practice the-end-of-chapter questions from Question 7 to Question 15 of Chapter 7. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 11 Chapter 7.

Experiment
Complete and upload the Lab Week 11 Report (The Postlab Report of "Acid and Base").

Exam
Take Exam 11: The exam covers objectives for Week 11.

Week 12

Reading Assignments and Lecture Slideshows
Read Chapter 8 Organic Chemistry Part Two (All Sections).
Practice all of the-end-of-chapter questions of Chapter 8. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 12 Chapter 8.

Experiment
Read the background information and complete the report.
Upload the Lab Week 12 Report ("Hydrocarbons").

Exam
Take Exam 12: The exam covers objectives for Week 12.
Exam Average on Organic Chemistry is determined after dropping one lowest scores from Exam 10 to Exam 12.

Week 13

Study Guide, Reading Assignments and Lecture Slideshows
Read Chapter 9 Carbohydrates (All Sections).
Practice all of the-end-of-chapter questions of Chapter 9. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 13 Chapter 9.

Experiment
Read the background information and the procedure and perform the experiment, recording the data.
Upload the Lab Week 13 Report (The Prelab/Data Report of "Carbohydrates").

Exam
Take Exam 13: The exam covers objectives for Week 13.

Week 14

Reading Assignments and Lecture Slideshows
Read Chapter 10 Lipids (All Sections).
Practice all of the-end-of-chapter questions of Chapter 10. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 14 Chapter 10.

Experiment
Complete and upload the Lab Week 14 Report (The Postlab Report of "Carbohydrates").

Exam
Take Exam 14: The exam covers objectives for Week 14.

Week 15

Study Guide, Reading Assignments and Lecture Slideshows
Read Chapter 11 Amino Acids and Proteins (All Sections).
Practice all of the-end-of-chapter questions of Chapter 11. (The-end-of-chapter questions are not graded, but you should work on them in order to do well in exams.)
Learning objectives and lecture slideshows are provided as supplement to help reading assignments.

Homework Assignments
Complete Homework Week 15 Chapter 11.

Experiment
You do not have a lab report this week.

Exam
Take Exam 15: The exam covers objectives for Week 15.
Exam Average on Biochemistry is determined after dropping one lowest scores from Exam 13 to Exam 15.

Discussion Forum: Before you start using the discussion board, make sure to read the following instructions and rules for online discussion. In each week, you should find the link "**Week X Discussion Forum**". Click on the link and you will be in the discussion board. Post your question by using "**Create Thread**" or participate by using "**Reply**" function. **Keep in mind that discussion forum participation is voluntary (NOT required or graded).**

Rules for Online Discussion in CHEM 1451 Section 500

Discussion board is meant to create a shared learning environment, facilitating student-to-student dialogue and student-to-instructor dialogue. Posted items must be relevant to students in the course. Never post any personal item (such as your address, telephone number, etc.) in the board. **Before you post a thread, check the following list.**
- Have you put some effort into it? **Discussion board is not a place where you can ask someone else to do your work.**
- Is it related to the contents of this course? (If no, then don't post. Email it directly to your Coach or me.)
- Is it appropriate in a shared learning environment? (If no, then don't post. For example, if you have a question in your grade, ask your Coach or me directly. Never discuss Exam questions and Exam grades in the board. Instead email me directly.)

Discussion board is not meant to replace your study. You should not create a thread to ask an answer to assignments, exams or lab reports. (For example, don't post a question such as "What is the answer to …?") Never post the answer to graded questions. Also, **make sure to post your question in the right place:** If you have a question about Week 01, then do not post it in Week 05. Make sure to post it in Week 01 Discussion Forum.

Participate: This is a shared learning environment. For the maximum benefit to all, everyone should contribute although participation is voluntary.
Report Glitches: Discussion forums are electronic. They break. If for any reason you are having difficulty participating, please call, email me of the issue. Chances are your classmates are experiencing similar issues.
Help Your Classmates: You may have more experience with online discussion forums than the person sitting next to you. Give them a hand. Show them it's not that hard. They're really going to appreciate it!
Respect Your Classmates: Read everything in the discussion thread before replying. This will help you avoid repeating something someone else has already contributed. Acknowledge the points made with which you agree and suggest alternatives for those with which you don't.
Be Brief: You want to be clear—and to articulate your point—without being preachy or pompous. Be direct. Stay on point. Don't lose your readers in an overly wordy sentence or paragraph.
Respect Diversity: It's a multi-cultural world in which we live. Use no language that is offensive—or could be construed as such—toward others. Racists, sexist, and heterosexist comments are unacceptable, as are derogatory and/or sarcastic jokes directed at religious beliefs, disabilities, and age. Inappropriate activities will be reported to UT Arlington.
No YELLING! Be friendly. Using bold, upper-case letters is bad form, like yelling at somebody, NOT TO MENTION BEING HARD ON THE EYE.
Proper Writing Style: This is a must. Write as if you were writing a term paper. Correct spelling, grammatical construction and sentence structure are expected in every other writing activity associated with scholarship and academic engagement. Online discussions are no different.
Cite Your Sources: Another big must! If your contribution to the conversation includes the intellectual property (authored material) of others, e.g., books, newspaper, magazine, or journal articles—online or print—they must be given proper attribution.
No Flaming! Criticism does not belong to the discussion board in this course. Please, no tantrums. Rants directed at or about any of your classmates, Coaches, and the instructor are simply unacceptable and will not be tolerated. The same goes for profanity. The academic environment expects higher-order language.
Emoticons and Acronyms: The rise in social networking and text messaging popularity has spawned a body of linguistic shortcuts that are not part of the academic dialogue. Please refrain from :-) faces and c u l8r's.
Lastly, You Can't Unring the Bell! Language is your only tool in an online environment. The electronic footprint you leave behind is strictly verbal. Be mindful: your classmates' perception of you is one of your own making. Once you've hit the send button, you'll find your statements harder to retract.
Review your written posts and responses to ensure that you've conveyed exactly what you intended. This is an excellent opportunity to practice your proofreading, revision, and rewriting skills—valuable assets in the professional world for which you are now preparing.
Hint: Read your post out loud before hitting the send button. This will tell you a lot about whether your grammar and sentence structure are correct, your tone is appropriate, and your contribution clear or not.

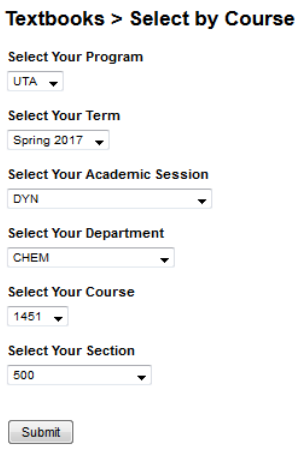
Acknowledgement
This document is prepared by modifying the content of http://teaching.colostate.edu/tips/tip.cfm?tipid=128
Contributors: Peter Connor - TILT Web Content Writer and Editor

How to Purchase the Lab Kit

Cut and paste the following URL address to a web browser.

http://www.bkstr.com/texasatarlingtonstore/shop/textbooks-and-course-materials

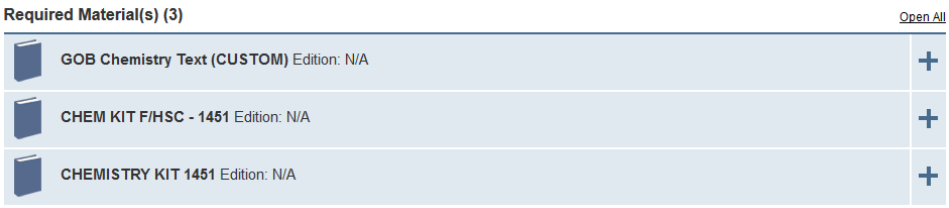
Select options in the box (As you select options, all boxes will show up eventually) as below. Then click on "Submit".



Then you should see three items listed as "Required Material".

- "GOB Chemistry Text (CUSTOM)" is a hardcopy of the textbook. **The textbook comes as the E-book when you purchase access to the online homework system. You do not have to purchase the textbook if you do not want to. This hardcopy does NOT come with an access code.**
- "CHEM KIT F/HSC – 1451" is the "used" lab kit.
- "CHEM KIT 1451" is the "new" lab kit.

As long as supplies last, you see two options (New and Used). There is no difference between the "used" and the "new" kits except that the "new" kit is obviously new. **I want you to know that you can sell back the lab kit (new or used) to the bookstore after the semester is over.**



When you click on the "+" symbol, you can find the price. For example, for "CHEM KIT F/HSC – 1451", the list will be expanded as follows.