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Office Hours: via email, phone or by appointment

Required Materials:

- 1) **The textbook** is “*Chemistry: An Introduction to General, Organic and Biological Chemistry* (11th edition)” by Karen C. Timberlake, Prentice Hall (2012) (available at www.uta.edu/bookstore). Whatever option (hardcopy or e-book) you choose, make sure to have an access to the content of the textbook. The textbook is also reserved in the central library if you have an access to campus. Only this textbook is supported in this course. No other textbook is supported.
- 2) **Access to the online homework system:** Read the instructions for Online Homework Registration under "Homework Info" in the course menu.
- 3) **The laboratory manual** is available free online within your course shell as part of your online materials.
- 4) **Laboratory Kit** available at www.uta.edu/bookstore (**required, not optional**).
- 5) **Chemicals:** You must supply chemicals (mostly household items such as salt) and some equipment (household items such as paper towel) by yourself.
- 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** (scanner or copy machine with fax capability, etc.). Scans of lab reports will be uploaded to your course shell for grading.

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, 1302 (College Algebra) 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.

Course Description: Upon completing the course, the student should be able to understand major concepts in general, organic and biochemistry.

- 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.

Strategies for Succeeding in Chemistry 1451:

- 1) Accomplish all lecture assignments and practice assignments. A very strong correlation exists between regular study and success in Chemistry 1451. Perform all assignments in order. Because the topics covered in this course build on each other, missing even one assignment can mean the difference between success and failure in the course.
- 2) Read the chapter in your textbook, prior to viewing the PowerPoint presentation.
- 3) Take down your own notes (You can use the activity sheets for each chapter provided in the online course shell.) as you read a chapter or view a PowerPoint presentation. Then review your notes afterwards. Correct obvious errors and note topics which require further study or clarification.
- 4) Work all of the suggested homework problems. Do not look in the solutions manual until you have given your best effort to solve the problem on your own. *Practice the problems that you could not solve until you could solve them without solutions. This is the one of the most important strategies that you could do to prepare for exams.*
- 5) **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 an additional 9 hours each week on your own, for a total of 12 contact hours of with Chemistry per week. Similarly, for this online course, you should expect to spend about 12 hours per week studying Chemistry, in order to succeed in this course.**
- 6) Do not procrastinate. These concepts take time to sink in, and you may have to practice these exercises over a period of many days in order master the necessary skills.

Resources

- 1) You will be able to communicate with your **Coach** for your questions.
- 2) For those who are able to visit the UTA campus, **the Chemistry Clinic** is located in Room 318 Science Hall and will be staffed with tutors (free services) available to answer your questions related to lecture and homework. Hours of the Chemistry Clinic will be announced on the front door of Room 318 SH. Also, **University College** (located in 105 Ransom Hall on UTA campus) offers free academic support for qualifying students and low-cost services for all students, including Cost Share Tutoring.

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

Laboratory Average*	25%
7 Exams	65%
Homework	10%
Course Grade	100%

*Your Laboratory Average will be determined in the following manner.

Pre-Lab Assignment	30%
Post-Lab Report	70%
Laboratory Average	100%

Grades will be assigned according to the following scale.

Total Numerical Grade	Letter Grade
90 and above	A
80 to less than 90	B
70 to less than 80	C
60 to less than 70	D
Below 60	F

Lab Grades

- 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 Pre-Lab Assignment is due on the date specified in the lab schedule. Each pre-lab is worth 100 points. If you turn in your Pre-Lab problems late, you will be penalized points, at **a rate of 2 point per hour**. Effectively, after two days late, you will have been penalized all the possible points for that assignment.
- 3) The Post-Lab Report is due on the date specified in the lab schedule. The post-lab consists of completing all the calculations and answering the questions outlined in the lab manual as well as a one or two paragraph conclusion where you will discuss your experimental results. Each post-lab is worth 100 points. If you turn in your Post-Lab problems late, you will be penalized points, at **a rate of 2 point per hour**. Effectively, after two days late, you will have been penalized all the possible points for that assignment.
- 4) All work, with the exception of computer-generated graphs, must be original and handwritten. You will make an image of your Pre-Lab assignment and Post-Lab Reports (by using a scanner). All images must be uploaded to the course website before or on the due date listed in the lab schedule.
- 5) Your lowest Pre-Lab grade and Post-Lab grade will be dropped. Additional missed labs will receive zero credit. Any zero resulting from Academic Dishonesty is not eligible to be the lowest grade dropped. No extension to the due date will be given.
- 6) 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.
- 7) 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.
- 8) If you drop or fail Chemistry 1451, grades earned in the lab cannot be carried over when you re-take Chemistry 1451.

Exam Grades

- 1) Seven exams will be given. These exams will cover the readings, lecture material, homework, and assigned problems.
- 2) No make-up exams will be given, and any missed exam will result in a grade of zero. However, the last exam (exam 7) score will replace the lowest exam score among previous six exams if it is to the student's benefit. For example, if you miss an exam, then the zero credit of your missed exam will be replaced by the 7th exam score. Note that the exam 7 score will not be replaced. **Therefore, the policy is NOT equivalent to dropping the lowest score.**
- 3) There will be no curving on exams or no extra credit assignments in this course.
- 4) You cannot exceed the allowed time for an exam.

Homework Grades

Web-based homework problems will be assigned. More information will be given within the online course shell. No extension to the homework assignment due date will be given. Students should practice them for succeeding in this course.

Lab Safety:

Mandatory Online Safety Training

Students registered for this course must complete the University's required "Lab Safety Training" prior to performing the first experiment. Students will be notified via MavMail when their online training is available. Once notified, students should complete the required module as soon as possible, but no later than their first lab experiment. Until all required Lab Safety Training is completed, a student will not be given access to the lab assignments, will not be able to participate in any lab activities, and will earn a grade of zero for any uncompleted work.

- 1) You should have received an email from the UTA Compliance Department. Click on the link in the email (or navigate to <https://training.uta.edu> for the login page)
- 2) Log on using your network log-on ID and password (what you use to access email). If you do not know your NetID or need to reset your password, visit <http://oit.uta.edu/cs/accounts/student/netid/netid.html>.
- 3) The available courses for completion will be listed. For Chemistry 1451, complete the course entitled 'Student Lab Safety Training'
- 4) If you did not receive the training email and you have not already completed the training you will need to contact the training helpline (817-272-5100) or email compliance@uta.edu.
- 5) Students who have not completed the training by the semester census date may be dropped from the lab (and consequently any linked lecture).
- 6) After you have successfully completed the online safety training, your instructor will be notified automatically within 2-3 business days. Once your instructor has been notified that you have successfully completed the safety training, your records within this course will be updated, enabling you to see your laboratory assignments.

Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e. through next August) for all courses that include a lab. If a student enrolls in a lab course in a subsequent academic year, he/she must complete the required training again.

All questions/problems with online training should be directed to the University Compliance Services Training Helpline at 817-272-5100 or by emailing compliance@uta.edu.

Safety Guidelines

IMPORTANT! You will be exposed to chemicals in this class. Personal protective equipment (PPE) is necessary to protect your body. 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.

Students with Pregnancies

For students who are pregnant, it is recommended by the Chemistry and Biochemistry Department that you do not enroll into a chemistry lab at this time. If you become pregnant during the semester, we recommend dropping the course as soon as possible; and special provisions will be made to assist you in finishing the course at a later date. *Please consult your faculty advisor for assistance.*

Other Course Policies:

Course Assignments

Students are responsible for completing and turning in their assignment on time, and for ensuring that the images of their hand-written lab reports are legible (the hand-writing should be legible and also the image of the hand-writing must also be of sufficient clarity/resolution to be graded).

Blackboard (Course Shell)

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, activity sheets, study guides, and lab manual) will be posted on the course website.

Class 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 (the one ending in "mavs.uta.edu") 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>.

Americans with Disabilities Act

The University of Texas at 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)*. 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 that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Academic Integrity

At UT Arlington, academic dishonesty is completely unacceptable and will not be tolerated in any form, including (but not limited to) "cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts" (UT System Regents' Rule 50101, §2.2). Suspected violations of academic integrity standards 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.

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/ses/fao>).

Course Schedule:

General Instruction

- The first introductory module (**Module 0**) last one week. Graded modules from **Module 1** to **Module 6** lasts for **two weeks**. The last graded module (**Module 7**) last 12 days because the semester ends on Friday.
- Typically in each graded module, you will need to turn in a Pre-Lab report on **Sunday of the first week** and a Post-Lab report with Data Sheet on **Sunday of the second week**.
 - In Module 7, a Post-lab is due on Friday of the second week.
- Typically Homework assignments for each module are due on **Sunday of the second week**. Although you can work at your own pace, make sure to start earlier and complete them by the due date.
 - In Module 7, homework assignments are due on Friday of the second week.
- By **Sunday of the second week**, you will take the exam corresponding to the content of the module.
 - In Module 7, you will take the exam by Friday of the second week.
- **Do not wait** until the last minute to complete homework or an experiment. If you experience 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.

Module 0: Week 1

Instruction

This Section contains materials devoted to help you become familiar with some of the features of Blackboard that have important impact on this course. You need to accomplish the following short tasks, before you attempt to submit academic work to be graded. **It is mandatory that you pass all of these tasks by the end of the first week.** You are allowed (and in fact encouraged) to move immediately into the academic modules as soon as you have completed these tasks. Do not wait until Week 2 to begin Module 1.

Reading Assignments

Read the syllabus and take the Syllabus Quiz. Pass the Syllabus Quiz by Sunday of Week 1 (PASS/FAIL: You must PASS to continue the course.)

Homework Assignments

Introduction to Sapling Learning due: Sunday of Week 1. (Graded and Required)

Experiments

Complete the mandatory online lab safety training

UTA-000 Getting Started

Pre-Lab Problems due: Sunday of Week 1 (PASS/FAIL: You must PASS to continue the course.)

Data Sheet and Post-Lab Report due: Sunday of Week 1 (PASS/FAIL: You must PASS to continue the course.)

Exam

Exam 0: Sunday of Week 1 (PASS/FAIL: You must PASS to continue the course.)

Module 1: Week 2 and Week 3

Instruction

In this module, you will study the contents of Chapter 1 and Chapter 2

Reading Assignments

Chapter 1 “Chemistry and Measurements” and Chapter 2 “Matter and Energy”

Homework Assignments

Chapter 1 and Chapter 2 due: Sunday of Week 3

Experiments

UTA-100 Measurements

Pre-Lab Problems due: Sunday of Week 2

Data Sheet and Post-Lab Report due: Sunday of Week 3

Exam

Exam 1: Sunday of Week 3

Module 2: Week 4 and Week 5

Instruction

In this module, you will study the contents of Chapter 3 and Chapter 4

Reading Assignments

Chapter 3 "Atoms and Elements"

Chapter 4 "Compounds and Their Bonds"

Homework Assignments

Chapter 3 and Chapter 4 due: Sunday of Week 5

Experiments

UTA-200 Chromatography of Food Dyes

Pre-Lab Problems due: Sunday of Week 4

Data Sheet and Post-Lab Report due: Sunday of Week 5

Exam

Exam 2: Sunday of Week 5

Module 3: Week 6 and Week 7

Instruction

In this module, you will study the contents of Chapter 5 and Chapter 7

Reading Assignments

Chapter 5 "Chemical Quantities and Reactions"

Chapter 7 "Solutions"

Homework Assignments

Chapter 5 and Chapter 7 due: Sunday of Week 7.

Experiments

UTA-300 Chemical Reactions

Pre-Lab Problems due: Sunday of Week 6

Data Sheet and Post-Lab Report due: Sunday of Week 7

Exam

Exam 3: Sunday of Week 7

Module 4: Week 8 and Week 9

Instruction

In this module, you will study the contents of Chapter 8.

Reading Assignments

Chapter 8 "Acids and Bases"

Homework Assignments

Chapter 8 due: Sunday of Week 9

Experiments

UTA-400 Acids and Bases

Pre-Lab Problems due: Sunday of Week 8

Data Sheet and Post-Lab Report due: Sunday of Week 9

Exam

Exam 4: Sunday of Week 9

Module 5: Week 10 and Week 11

Instruction

In this module, you will study the contents of Chapter 10 and Chapter 11.

Reading Assignments

Chapter 10 "Introduction to Organic Chemistry: Alkanes"

Chapter 11 "Unsaturated Hydrocarbons"

Homework Assignments

Chapter 10 and Chapter 11 due: Sunday of Week 11

Experiments

UTA-500 Hydrocarbons

Pre-Lab Problems due: Sunday of Week 10

Data Sheet and Post-Lab Report due: Sunday of Week 11

Exam

Exam 5: Sunday of Week 11

Module 6: Week 12 and Week 13

Instruction

In this module, you will study the contents of Chapter 12 and Chapter 14.

Reading Assignments

Chapter 12 "Organic Compounds That Contain Oxygen and Sulfur"

Chapter 14 "Carboxylic Acids, Esters, Amines, and Amides"

Homework Assignments

Chapter 12 and Chapter 14 due: Sunday of Week 13

Experiments

UTA-600 Colligative Properties

Pre-Lab Problems due: Sunday of Week 12

Data Sheet and Post-Lab Report due: Sunday of Week 13

Exam

Exam 6: Sunday of Week 13

Module 7: Week 14 and Week 15

(IMPORTANT) The module 7 ends on Friday (NOT on Sunday) of Week 15.

Instruction

In this module, you will study the contents of Chapter 13, Chapter 15, and Chapter 16.

Reading Assignments

Chapter 13 "Carbohydrates"

Chapter 15 "Lipids"

Chapter 16 "Amino Acids, Proteins, and Enzymes"

Homework Assignments

Chapter 14, Chapter 15 and Chapter 16 due: **Friday** of Week 15

Experiments

UTA-700 Carbohydrate

Pre-Lab Problems due: Sunday of Week 14.

Data Sheet and Post-Lab Report due: **Friday** of Week 15

Exam

Exam 7: **Friday** of Week 15