



Syllabus: **Introductory Chemistry**

Course Number: **CHEM 1405**

Semester & Year: **Fall 2013**

Instructor Information

Name: **M. Sheets**

Office: **Chemistry 201**

Telephone: **903-823-3359**

E-mail: **mike.sheets@texarkanacollege.edu**

Office Hours: **see posted hours**

### **Textbook/Materials Information**

*An introduction to Chemistry –Atoms First*, ISBN # 978-0-9778105-9-8, Bishop, 1<sup>st</sup> Edition  
(see the note on the text at the end of this syllabus)

*Problems for Chemistry 1405*, by Sheets

*Laboratory Guide for Introductory Chemistry*, by Howard, Harman  
and Sheets

Scientific Calculator (TI-30xA recommended)

**Approved** Chemical Splash Goggles

### **Student Learning Outcomes for the Course**

The student will become familiar with the science process and terms used in scientific communication.

The student will become familiar with matter and its various forms in chemistry.

The student will understand and be able to use different measurement units and tools, and convert from one unit to another.

The student will be familiar with the basic parts of the atom, what role these parts play, and how they influence the periodic table.

The student will understand how the different types of compounds are formed and the influence polarity and shape have on chemical properties.

The student will be able to name simple inorganic compounds, and from the name, write a formula for the compound.

The student will be able to use the mole and, given an equation, be able to perform stoichiometric calculations

The student will be familiar with solution terminology and be able to calculate with different concentration units.

The student will be familiar with the three acid-base theories and be able to use pH.

The student will be familiar with basic concepts in organic and biochemistry.

The student will be familiar with basic chemical lab equipment, perform simple experiments and calculate the results.

### **Student Requirements for Completion of the Course**

You will be given five major tests, plus a **comprehensive final** at the end of the semester. Each of the tests will be worth 100 points, with the final worth 100 points. Your lowest percentage major test grade, excluding the final, will be dropped. You will also be given short quizzes worth 30 points. Labs will be averaged as one major test grade. At the end of the

semester, grades will be assigned according to the number of points you have gained in relation to the number of points possible. Tests will cover the following: Test 1 – Unit 1 (p. 3-8, 75-87); Test 2 – Unit 2 (p. 9-23, 32-60, 120-129); Test 3 - Unit 3 (p. 86-103, 130-155); Test 4 – Unit 4 (p. 90-91, 171-217, 235-247); and Test 5 – Unit 5 (p. 107-105, 261-270, 299-323, 382-387, 413-438). Material from Unit 6 (p. 549-573, 248-260) will be included on the final. Organic and biochemistry will be covered by worksheets during the semester and will be also represented on the final.

## Student Assessment

You have the following possibilities for earning points:

|                                     |                            |
|-------------------------------------|----------------------------|
| (1) 6 Element quizzes @ 30 pts      | 180 points                 |
| (2) 5 major tests @ 100 pts         | 500 points                 |
| (3) Laboratory grade                | 100 points                 |
| (4) Final Exam @ 100 points         | <u>100 points</u>          |
|                                     | 880 points                 |
| (5) Lowest major test grade dropped | <u>-100 points</u>         |
|                                     | <b>780 points possible</b> |

Computer lessons are available for your use. Besides assisting you in learning concepts and providing practice, these lessons (90) are worth **0.5 bonus points each**, for a total of **45 bonus points**. Should you complete all 90 lessons, I will add 5 points to that for a total of **50 bonus points**. These are based in the computer lab in room 218 located in the southeast corner of the chemistry building (computers in the biology computer lab can also access these tutorials). Please do not wait until the end of the semester to work on all of the tutorials. The computer room gets crowded at that time. Part of the benefit is in doing the lessons in the computer lab at the same time as we are learning the concepts in class. Remember – **there are 9 pages of 10 lessons per page** (see last page for instructions on changing pages of lessons). Some of these tutorials take quite a bit of time to complete, so start on them early and work steadily throughout the semester.

## Grading Scale

| Grade | %        |
|-------|----------|
| A     | 90-100   |
| B     | 80-89    |
| C     | 70-79    |
| D     | 60-69    |
| F     | 59-below |

## Class Schedule

Class will meet from 8-10:20 AM, M-Th for lecture, and from 10:30 AM-12:50 PM, M-Th for lab. Any work on bonus lessons will be on your time.

## Absentee Policy

Texarkana College's absentee policy allows instructors to withdraw a student from a course due to excessive absences. If a student leaves and returns during class or leaves the class before the class is over, he/she **may** be considered absent. Three tardies constitute one absence. It is the student's responsibility to check the syllabus for each instructor's tardy policy.

In some workforce/vocational areas, such as nursing and cosmetology, certification requirements necessitate an absentee policy that is more stringent than the institutional policy. In these instances, the matter of certification takes precedence over local policies, since certification policies are established by the State of Texas.

Faculty members **are not** obligated to provide opportunities for students to make-up missed assignments and tests as a result of a student’s absence from class. The institution is not required to take attendance with the exception of workforce/vocational areas, where certification requirements require taking attendance. However, experience demonstrates that regular attendance enhances academic success. As such, students are expected to attend each meeting of their registered courses.

A student should not stop attending a class without formally withdrawing from the course by the institutions published Last Day for Students to Drop. If a student stops attending class after the published Last Day for Students to Drop, the student **may** receive a grade of “F” in the class. The instructor will submit the last date of attendance for students receiving a grade of “F” or “W”.

Withdrawal from a course(s) **may** affect a student’s current or future financial aid eligibility. Students should consult the Financial Aid Office to learn both short and long term consequences of a withdrawal.

**Excused Absences**

A student’s absence due to school trips and/or school business will not be counted against a student’s allowable number of absences. Military duty and absences for Holy Days (FBD LEGAL) are covered in a separate section of the catalog and the student handbook. These are the only excused absences that are considered by Texarkana College. Responsibility for work missed for any absence is placed on the student. Instructors are required to allow students to make up work missed if the absence is due to military duty\* or religious holy days when students follow the correct notification procedures. Instructors are not required to allow students to make up work for absences due to other reasons. Make-up policies are listed in each individual instructor’s syllabus.

**Maximum Allowable Absences**

After official registration, the following number of unexcused absences will be the maximum allowable before a student **may** be dropped from the class. Mandated program certification requirements detailed for certain programs regarding the maximum allowable unexcused absences takes precedence over the following information.

| A COURSE THAT MEETS FOR THE FULL 16 WEEK SEMESTER |  |
|---|--|
| Class or Lab Meets:                               | An instructor may withdraw a student from a course if absences exceed: |
| Once a week (Night / Friday classes)              | 2  |
| Twice a week (MW or TTh classes)                  | 4  |
| Three times a week (MWF or TThF classes)          | 6  |
| Four times a week (MTWR classes)                  | 8  |
|   | Three tardies count as one absence                                     |

## CHEM 1405 Attendance Policy

Students are expected to attend and participate in class. While it is recognized that there are many valid reasons for missing class, it must be remembered that if you miss class, you will miss discussion or lab work important to you. Excessive absences can lead to your being dropped from class. **You are allowed two (4) absences from lecture, and two (2) from lab.**

## CHEM 1405 Make-up Policy

If you miss a major exam, you will be allowed one (1) make up test. You will need to make up that exam ASAP. Any other missed exams will be treated as a "0" grade. Remember that one grade will be dropped. The 30-point quizzes may be made up until two weeks before finals. **No quizzes will be made up the week before finals or final week.**

## Academic Integrity Statement

Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated by the Dean of Students. Proven violations of this nature will result in the student being dropped from the class with an "F".

This policy applies campus wide, including TC Testing Center, as well as off-campus classroom or lab sites, including dual credit campuses. This information can be found in the Student Handbook at

<https://texarkanacollege.edu/PDFFiles/CurrentStudents/studenthandbook.pdf>.

## Disability Act Statement:

Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance.

If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need for this class. *It is best to request these changes at the beginning if not before the start of class* so there is ample time to make the accommodations..

## Financial Aid:

**Attention!** Dropping this class may affect your funding in a negative way! You could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.

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Introductory chemistry is designed as a first course in chemistry. Some of the topics covered include the fundamental principles of theoretical and applied chemistry, stoichiometry, atomic structure, periodic arrangement of elements, ionic and covalent bonding, solutions, and acids and bases. Topics in laboratory have been chosen to amplify concepts presented in lecture.

There is a great deal of material to be learned and not much time in which to learn it. To be successful, you must devote sufficient time to the class. This may mean several hours per day outside of class, Exactly how much time will depend on the individual and his/her circumstances.

Please observe the college rules concerning food, drinks, and smoking. NO food or drinks will be allowed in the laboratory. **Cellular phones are not to be seen or heard before, during, or after class.** If your phone (or pager) rings, you **may** be asked to leave class.

Please be aware of the guidelines for conduct as stated in the college catalog and student handbook. Students must conduct themselves so other students are not distracted from the pursuit of learning. Discourteous or unseemly behavior will not be tolerated. Faculty members, staff and other students are to be treated with courtesy and respect. If unacceptable behavior occurs, the student may be asked to leave the classroom and may be subject to disciplinary action up to and including being dropped from the class with a grade of "F".

If you do not have a scientific calculator, I recommend a **Texas Instruments TI-30 XA**.

**If you email me, please put CHEM 1405 in the subject line.**

To be successful in this class you must take responsibility for your own learning. Some fortunate few may be able to absorb and process all needed information and skills on first hearing or reading. The rest of us usually have to devote varying amounts of time to studying. "Studying" does not mean just "read the material." It also includes:

- correlating your notes (which you *surely* have taken) with the text material
- working problems with a view of not simply getting the "right answer," but of understanding the process of problem solving
- developing and understanding the material to the point where you are able apply concepts in unfamiliar situations

There are several ways in which you can help yourself in this class. First of all, **preview the material** before class - read ahead. If you have an idea of what we are going to discuss in class, it will make more sense than to have it dumped on you cold.

Second, **if you need help, get it as soon as possible.** Do not wait until you are hopelessly behind. Of course you can come by and see me for help, but you also have other options. One of these is a **study group**. Find three or four people to study with (not eat pizza, talk about sports or soap operas, or even gripe about classes - study). This has several benefits. If you missed a concept or step in

class, it is likely that one of your group "got it" and can pass it onto you. Also, one of the best ways to ensure that you really understand an idea is to try to explain it to another student. The old excuse, "I know, but I just can't tell you," usually translates into "I don't know it that well." Another help you have available is the **tutoring program** that Texarkana College provides. The tutors work out of Student Support Services located in the CEC building. Sometimes tutors are stationed in this building. Do not wait until you are in deep trouble before you see the tutors. These students are paid by the college and their services cost you nothing.

The third way to help yourself is with the **computer tutorials** which are available to you. As explained earlier, these lessons can help you in learning concepts we are covering in class and can provide a boost to your grade, should you need it

## To Sign-On to the Tutorials

You must sign on to the TC system using your student name and password. You will then see the computer home page. Using the mouse, click on the **Chemistry Lessons** icon. You should see a screen labeled at the top: "Comprehensive Chemistry CD-ROM." Follow directions from here on. The course name is **CHEM 1405**. When you are asked for your name, use your **last name only**. You will be asked for a **password**. Type in whatever you wish to use. The first time you sign on, you will be asked to repeat the password for verification. That will be the password you must use from then on. **Please do not forget your password**. If you do, I can go in and change it, but it would be nice if you wouldn't forget it in the first place. The computer keeps track of the tutorials you have completed and I will record those totals at the end of the semester.

Once again, there are **90** bonus lessons – **9 pages** of **10 lessons each**. The **cursor keys** (or the mouse) let you **move up and down among the lessons on a page**. The **Page Up** and **Page Down** keys let you **change pages of lessons**.

You might also want to inquire at **Student Support Services** about workshops or seminars dealing with study skills, test anxiety, etc. They can be a help and will not cost you anything.

### **Dates to remember:**

|                      |   |                         |
|----------------------|---|-------------------------|
| Labor Day            | - | September 2             |
| Last Day to Drop     | - | November 22             |
| Thanksgiving Holiday | - | November 25 - 29        |
| Final Exams          | - | December 12, 16, 17, 18 |

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This semester for Introductory Chemistry we will be using an open source textbook developed by Dr. Mark Bishop. You can purchase a copy of the textbook at the TC Bookstore, or you can download it in various formats to your computer, tablet, phone, etc. for free (he welcomes \$20 donations for use of his book) from Dr. Bishop's website.

To download the book:

1. Go to [http://preparatorychemistry.com/Bishop\\_iBook.htm](http://preparatorychemistry.com/Bishop_iBook.htm)
2. Find the directions for the type of device you would like to use. iPad or iPhone, Kindle, Nook, or Android devices.
3. You have the option of downloading individual chapters at a time or the whole book.

To access the book from the web on your computer (not download):

Go to [http://preparatorychemistry.com/Bishop\\_Atoms\\_First.htm](http://preparatorychemistry.com/Bishop_Atoms_First.htm) and you can select chapters to read online.

Dr. Bishop's site also includes narrated PowerPoints where he reads the text to you while you watch his slides, animations, and various study tools.

The text will be used as a reference and as an adjunct to your lecture notes. You will be given copies of the PowerPoint lectures and opportunities to download the PowerPoints to your own devices. I urge you to read the text as questions from the test are likely to come from there as well as other places.