COURSE DESCRIPTION:
Introductory Chemistry. Introduction to the principles and concepts of chemical thought. Co-requisite: CHE 111L. Prerequisite: eligibility for MTH 138. (Algebra). This course is intended for non-chemistry majors. Chemistry majors need to take CHE133.

TEXT AND MATERIALS:
*Loose-leaf versions are available at the local bookstores that contain access codes to Mastering Chemistry, the required on-line homework.
*An ebook option is available to you when you sign up for your Mastering Chemistry account.
*If you buy an older edition of the book, you may buy the access code independently online.
*REQUIRED: Mastering Chemistry Homework Account

Access your Mastering Chemistry homework account through the Pearson MyLab and Mastering Widget on the D2L course homepage.
*PLEASE HAVE YOUR MASTERING CHEMISTRY ACCOUNT AVAILABLE DURING THE FIRST WEEK OF THE COURSE AND BEGIN YOUR FIRST TWO HOMEWORK ASSIGNMENTS. YOU HAVE A FREE TRIAL FOR A WEEK TO GIVE YOU TIME TO FIND $$.

GRADING POLICY:

5 exams (2 pts each question). Exams 1-3 have 50 questions. Exam IV and the final exam are both given during the longer final exam period. Both of these tests are slightly shorter than the first three tests. The dates of exams are shown on the course calendar. The exams will be given during class time and are T/F or multiple choice.

If you have perfect attendance, 10 extra credit points will be added to your final exam (after curve, if curve is implemented) OR final exam grade may be duplicated over your lowest exam score, whichever helps you more, OR you may exempt final exam. (Only school-related absences will not count against you.)
If you have 1-3 absences, the final exam grade may be duplicated over your lowest score (as long as final exam grade is higher). Excused absences (with a note) will not count against you.

Quizzes - Quizzes will be assigned either in D2L or given in class, announced or unannounced. Lowest quiz will be dropped.

On-line homework – Students are required to get access to a Pearson MyLab Homework account. The access code is acquired with purchase of a book or can be purchased online with or without an ebook. Instructions on how to navigate the Mastering Chemistry web site are provided at the website and on D2L. In the gradebook, the average from Mastering Chemistry will be updated before every test (so updated only 4 times, unless you have a special request via email or in-person.) Individual chapter homework assignments will not be posted in D2L gradebook.

The 5 tests, quiz average, and homework average are weighted equally in the gradebook.

GRADEBOOK AND CLASS MATERIAL:

Grades are kept in D2L and are always available for students to see. Announcements are always being posted, so please check D2L frequently. I try to help you out with as many resources as possible, so if a study guide is posted, I want you to know about it. All Powerpoints that we cover in class are posted beforehand. You have the opportunity to print these out and bring them to class. Problems are not solved on the posted Powerpoints; they are solved in class, so keep a pen and calculator out and keep your participation active.

Method of Evaluation: Since all grades assigned are equally weighted, you can calculate your score by adding up your percentages and divided by 7.

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<thead>
<tr>
<th>item</th>
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<tbody>
<tr>
<td>Exam I</td>
<td>100</td>
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<td>Exam II</td>
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<td>Exam III</td>
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<td>Exam IV</td>
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<td>Final Exam</td>
<td>100</td>
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<tr>
<td>Quiz Average</td>
<td>100</td>
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<tr>
<td>On-line homework Average</td>
<td>100</td>
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<td><strong>TOTAL POINTS</strong></td>
<td><strong>700</strong></td>
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ATTENDANCE POLICY:

Attendance in class is mandatory. Eight (8) or more unexcused absences will result in an ‘F’ for the course. Absences may be assigned to anyone who disrupts class, sleeps in class, or consistently comes in late or leaves early. If you arrive late and do not see the roll sheet, please contact the instructor immediately after class; otherwise it will be an absence. For a proven, excused absence for an exam (ie: doctor’s note), students must arrange to take a makeup exam within a week. Missing an exam with no valid excuse results in a zero. 

Out of politeness, tell instructor if there are circumstances in which you may arrive late or leave early.
CLASSROOM BEHAVIOR EXPECTATIONS:

- Come to class prepared (spend at least 2 hours working problems and reviewing previous material before each class period) and be on time and in your seat.
- **Computer Use:** If you want to view the Powerpoint on a closer screen using your computer, that’s acceptable. For many, it’s easier to take notes than looking back and forth between the big screen and your paper. **If you browse websites, you are a distraction to everyone behind you, and it disturbs me so much that I may outlaw computer use, even for those who use it responsibly.** Don’t be the one who ruins it.
- **No headphones** in your ears during lecture. (I’ll sing the lecture notes if you absolutely have to have music.)
- Absences may be assigned to anyone that disrupts class, sleeps in class, or consistently comes in late or leaves early. Read Attendance Policy Section for how this can affect grades.
- Bring a scientific calculator to class. Cell phones may NOT be used on quizzes or exams. A cleared programmable calculator must be shown to the instructor before you leave a test or quiz. If you have to use the facilities during a test, turn in your cell phone while away.
- Turn off and put away cell phones; NO text messaging during class. Anyone caught using a cell phone during class can have an absence assigned to them.
- Be courteous and respectful of other students, SI leader, and instructor.
- Learn your section number. Place section number on all items turned in.
- Significant figures are required on all answers given on quizzes, assignments and exams.
- Make-up quizzes and tests are only given to students with an excused absence. If there are computer issues with D2L quizzes, an alternative on-paper quiz can be taken during my office hours.
- Cheating…not allowed or respected. Will result in a zero with no chance of making up assignment.
- Students who violate these rules will be asked to leave. Repeat offenders will be subject to disciplinary action in accordance with University policies as described in the Code of Student Conduct.

ACADEMIC INTEGRITY (A-9.1):

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct handbook; including but not limited to a score of zero on exam, expulsion from the class or expulsion from the University.
WITHHELD GRADES SEMESTER GRADES POLICY (A-54):

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

STUDENTS WITH DISABILITIES:
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

CLASSROOM BEHAVIOR POLICY:
Acceptable Student Behavior: Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

CORE OBJECTIVES AND RESOURCES

General Education Core Curriculum Objectives: The Texas Higher Education Coordinating Board has identified six core learning objectives: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives. Although this chemistry course develops the first four core-learning objectives, it only submits assessment assignments to the University Core Assessment Committee every even spring for the teamwork general education core curriculum requirement. If this is an even spring semester, another, “shell” course has been created to collect student artifacts to meet this state requirement. You will see this course on your D2L list. During the even spring semester, you will receive an assignment in the laboratory portion of the course that fulfills both the requirements of the lab and the needs of Stephen F. Austin State University’s Core Curriculum Assessment Plan with the Texas Higher Education Coordinating Board. When you complete this one assignment, you need to upload the assignment to both the Chemistry dropbox and the Teamwork dropbox.
Please note that this only applies to the specific assignment listed in the matrix below. All other assignments should be submitted according to regular class operations. If you have any questions, please see your instructor or contact the University Assessment Specialist at (936) 468-1267 or jstringfield@sfasu.edu. The chart below indicates the core objectives addressed by this course, the assignment(s) that will be used to assess the objectives in this course and uploaded to the D2L Teamwork dropbox this semester, and the date the assignment(s) should be uploaded to the D2L Teamwork dropbox. Not every assignment will be submitted for core assessment every semester. Your instructor will notify you which assignment(s) must be submitted for assessment in the D2L Teamwork dropbox.

Core Objective 1: Critical Thinking: to include creative thinking, innovation, inquiry and analysis, evaluation and synthesis of information.

Definition of CRITICAL THINKING: disciplined thinking that is clear, rational, open-minded, and informed by evidence.


Critical thinking involves the use of a group of interconnected skills. The skills needed can be broken down into six steps.

Six Steps of CRITICAL THINKING

1. Knowledge means a student must have basic knowledge about the subject.

2. Comprehension requires understanding of the subject. Students that comprehend the new knowledge are able to relate the new knowledge to what they already know. Comprehending goes beyond simply parroting material back.

3. Application requires both knowledge and comprehension. Students must be able to carry out a task or apply their knowledge and comprehension to an assigned task.

4. Analysis involves breaking the knowledge down into smaller parts so it become clear how the smaller parts are related to other ideas.

5. Synthesis involves the ability to put together the parts you analyzed with other information to create something original

6. Evaluation occurs once we have understood and analyzed what is said or written and the reasons offered to support it. Then we can appraise this information in order to decide whether you can give or withhold belief, and whether or not to take a particular action.

Adapted from: http://www.mhhe.com/soscience/philosophy/reichenbach/m1_chap02studyguide.html (accessed May 23, 2013)
Core Objective 2: Communication Skills: to include effective development, interpretation and expression of ideas through written, oral, and visual communication.

COMMUNICATION SKILLS in the sciences

For an excellent resource in scientific communication from a highly reputable source see the information provided on the Nature website link shown below.

http://www.nature.com/scitable/topic/scientific-communication-14121566 (accessed May 31.2013)

Three especially informative links within the link shown above are:

- Effective Communication
- Effective Writing
- Audience/Purpose

Core Objective 3: Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

EMPIRICAL AND QUANTITATIVE SKILLS

Chemists rely on observations to explain the nature of the substances they study. There are two types of observations exist: qualitative and quantitative. A qualitative observation is an observation made with the senses and is usually expressed using words instead of numbers. Qualitative observations about a person sick in the hospital might include that the person is breathing rapidly, has a high temperature, and is very thin.

A quantitative observation is an observation that requires a numerical measurement and describes something in terms of "how much". The quantitative observation that a person has a temperature of 103.6 °F is much more useful information than just knowing that the person has a fever. Quantitative observations are preferred by scientists. Often quantitative data is acquired in lab.

One or more measurement is always a part of any quantitative observation. A measurement determines the dimensions, capacity, quantity, or extent of something. The most common types of measurements made in chemical laboratories are those of mass, volume, length, temperature, pressure, and concentration. Measurements always consist of two parts: a number, which tells the amount of the quantity measured, and a unit, which tells the nature or kind of quantity measured. A measured number without a unit is meaningless.

Once quantitative data is obtained, chemists then mathematically manipulate and analyze data.

Adapted from saplinglearning.com; accessed May 31, 2013

Core Objective 4: Teamwork: to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Definition of TEAMWORK: work done by several associates with each doing a part but all subordinating personal prominence to the efficiency of the whole.


TEAMWORK General Rules
Each team member needs:
- all ideas evaluated critically;
- treat others in the group with respect;
- everyone needs to pull their weight, meet deadlines, and contribute equally;
- actions need to be followed through;
- reporting needs to be accurate and comprehensive;
- problems with under-performing team members need to be discussed openly and resolved quickly; and
- peer assessment should be given fairly.

**Student Learning Outcomes:** Upon completion of this course, the students are expected to
- apply chemistry concepts using critical thinking skills and the scientific method to analyze and evaluate information to reach conclusions within problem sets and lab experiments. (COs 1 & 3)
- use communication skills to demonstrate their interpretation and analysis of scientific data. (CO 2)
- apply logic, quantitative reasoning, and pattern recognition to analyze and evaluate numerical data/observable facts to reach conclusions within problem sets and lab experiments. (COs 1 & 3)
- demonstrate the ability to cooperate within groups to gather results of an experiment, analyze data, and draw conclusions using communication skills. (COs 2 & 4)

Course Calendar on Following Page:
<table>
<thead>
<tr>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
<th>homework due dates</th>
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</thead>
<tbody>
<tr>
<td>8/27 Welcome, Covering syllabus and online homework requirements. CH 1</td>
<td>8/29 CH 2: Measurement &amp; Problem Solving (8/30 Last day to change schedule or register)</td>
<td>8/31 CH 2: Measurement &amp; Problem Solving</td>
<td>Intro to Mastering – 9/4 CH 1 – 9/4</td>
</tr>
<tr>
<td>9/10 CH 4: Atoms and Elements</td>
<td>9/12 CH 4: Atoms and Elements</td>
<td>9/14 CH 4: Atoms and Elements</td>
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<tr>
<td>9/17 <strong>EXAM I</strong> (CH 1-4)</td>
<td>9/19 CH 5: Molecules &amp; Compounds</td>
<td>9/21 CH 5: Molecules &amp; Compounds</td>
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<td>9/24 CH 5: Molecules &amp; Compounds; Chp 6 time permitting</td>
<td>9/26 CH 6: Chemical Composition</td>
<td>9/28 CH 6: Chemical Composition</td>
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<td>10/1 CH 6: Chemical Composition</td>
<td>10/3 CH 7: Chemical Reactions + Review for test if time permitting</td>
<td>10/5 Review for test</td>
<td>CH 5 – 10/1 CH 6 – 10/8 CH 7 – 10/8</td>
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<tr>
<td>10/8 <strong>EXAM II</strong> (CH 5-7)</td>
<td>10/10 CH 8: Quantities in Chemical Reactions</td>
<td>10/12 CH 8: Quantities in Chemical Reactions</td>
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<td>10/15 CH 8: Quantities in Chemical Reactions; Chp 9 time permitting</td>
<td>10/17 CH 9: Electrons in Atoms and the Periodic Table</td>
<td>10/19 CH 9: Electrons in Atoms and the Periodic Table</td>
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<tr>
<td>10/22 CH 9: Electrons in Atoms and the Periodic Table</td>
<td>10/24 CH 10: Chemical Bonding <strong>OCT 24 LAST DAY TO DROP COURSES</strong></td>
<td>10/26 CH 10: Chemical Bonding</td>
<td>CH 8 – 10/22 CH 9 – 10/29 CH 10 – 11/5</td>
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<td>10/31 CH 10: Chemical Bonding</td>
<td>11/2 Review for test</td>
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<tr>
<td>11/5 <strong>EXAM III</strong> (CH 8-10)</td>
<td>11/7 CH 13: Solutions</td>
<td>11/9 CH 13: Solutions</td>
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<td>11/12</td>
<td>CH 13: Solutions CH 14: Acids and Bases</td>
<td>11/14</td>
<td>CH 14: Acids and Bases; In class quiz over</td>
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<td>first part of acids and bases!</td>
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<tr>
<td>11/19</td>
<td>Thanksgiving</td>
<td>11/21</td>
<td>Thanksgiving</td>
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<tr>
<td>11/26</td>
<td>CH 11: Gases</td>
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<td>12/3</td>
<td>CH 12, 15: Intermolecular Forces and</td>
<td>12/5</td>
<td>Finish any notes. Start Review for final</td>
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<tr>
<td></td>
<td>Thermodynamics; CH 17: Radioactivity</td>
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**Chem 111-003  Final Exam Mon, Dec 10, 10:30-12:30**