Program Learning Outcomes: There are no specific program learning outcomes for this major addressed in this course. This course is a general education core curriculum course.

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.

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Date Due in D2L</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO 1 - Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</td>
<td>Skills developed in this course</td>
</tr>
<tr>
<td>CO 2 - Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas though written, oral, and visual communication.</td>
<td>Skills developed in this course</td>
</tr>
<tr>
<td>CO 3 - Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>Skills developed in this course</td>
</tr>
<tr>
<td>CO 4 - Teamwork</td>
<td>To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.</td>
<td>Skills developed and assessed in lab every even spring See syllabus</td>
</tr>
</tbody>
</table>
**Course Objective:** To provide students with an explanation of the basic concepts of chemistry and to apply these concepts to problem solving involving critical thinking.

**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 and express their ideas and thoughts to team members. (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)
<table>
<thead>
<tr>
<th>Name</th>
<th>Dr. Fry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>Chemistry &amp; Biochemistry</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:frydr@sfasu.edu">frydr@sfasu.edu</a></td>
</tr>
<tr>
<td>website</td>
<td>course information on D2L</td>
</tr>
<tr>
<td>Office</td>
<td>Math 120</td>
</tr>
<tr>
<td>Hours</td>
<td>MWF: 9:30-11; TR 2:30-3:20</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTION:**
Conceptual Chemistry is an introductory course for non-science majors. CHE 101 is an overview of the field of chemistry and its impact on science, technology, society, and environment. This conceptual approach involves a minimum of mathematics and investigates the chemistry found in the world around us that impacts you and your immediate and extended environment. This course utilizes an integrated lecture/lab format. Lab fee required.

**TEXT AND MATERIALS:**
- Lab Manual: *Chemistry in Context: Apply Chemistry to Society. ACS, 8th edition*

**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. All Powerpoints and Student Notes that we cover in class are posted beforehand. Print out notes. Class time is for highlighting key points, not writing notes. Please acquire lab manual before second week of class.

**ATTENDANCE POLICY:**
Attendance in class is mandatory. Seven (7) 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. *Out of politeness*, tell instructor if there are circumstances in which you may arrive late or leave early.
**GRADING POLICY:**
Grades are based upon performance.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>POINTS</th>
<th>DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEKLY QUIZZES</td>
<td>20 EACH (HIGH 10 OUT OF 13); 200 TOTAL</td>
<td>THURSDAYS</td>
</tr>
<tr>
<td>LAB ACTIVITIES</td>
<td>15 EACH (HIGH 10 OUT OF 13); 150 TOTAL</td>
<td>TUESDAYS &amp; THURSDAYS</td>
</tr>
<tr>
<td>EXAM 1</td>
<td>CUMULATIVE EXAM; 50 TOTAL</td>
<td>10/2</td>
</tr>
<tr>
<td>EXAM 2</td>
<td>CUMULATIVE EXAM, ABOUT 10 FROM E1 AND 50 FROM E2; 60 TOTAL</td>
<td>11/1 THURSDAY BEFORE THANKSGIVING</td>
</tr>
<tr>
<td>EXAM 3</td>
<td>CUMULATIVE EXAM; 50 TOTAL</td>
<td>TAKE HOME, DUE MONDAY OF FINALS</td>
</tr>
</tbody>
</table>

**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.
<table>
<thead>
<tr>
<th>Powerpoint</th>
<th>Chemistry</th>
<th>Chapter</th>
<th>Lab</th>
</tr>
</thead>
</table>
| 1. Matter Classification | 1. Types of Matter  
2. Physical & Chemical Properties  
3. Atom Models & History  
4. Isotopes & Ions  
5. Periodic Table Organization  
6. Ionic vs. Covalent compounds  
7. Ionic compounds: nomenclature | 1. Burning Mg demo; Gummy Bear demo  
Phet: Building an atom | |
2. Molar mass  
3. Conversions  
4. Scientific Notation and Significant Figures | Parts of all | Lab 4: Graphing the Mass of Air and the Temp. of Water. |
| 3. the air we breathe | 1. Parts of the Atmosphere  
2. Air Pollution  
3. covalent compounds  
4. alkanes  
5. ppm, ppb, etc  
6. balancing reactions | 2 | |
| 4. The mole & molecular shape | 1. The Carbon Cycle  
2. The Mole  
3. Avogadro’s Number  
4. Molecular Shape including polarity  
5. EM radiation | 4 | PhET Molecular Shapes  
Lab 8: Molecular Models, Bonds, and Shapes  
Lab 6: Color and Light  
Lab 5: What Protects us from Ultraviolet Light? |
<table>
<thead>
<tr>
<th>Target Material for Exam 2. Given Thursday before Thanksgiving.</th>
</tr>
</thead>
</table>
| 5. Energy of Combustion | 1. heat vs. temperature  
2. exothermic & endothermic  
3. Fossil Fuels & Electricity  
4. 1st & 2nd Law of Thermodynamics  
Lab 13: Preparation and Properties of Biodiesel |
| 6. Energy from Alternative Sources | 1. Isotopes  
2. Nuclear Reactions  
3. Half-life  
4. Radiation Effects  
5. Environmental Examples | 6 | Lab 12: Comparing the Energy Content of Fuels  
Phet: Isotopes  
Phet: Nuclear Fission |
| 7. Energy Storage | 1. REDOX Reactions  
2. Galvanic Cells  
3. Batteries  
4. Fuel Cells | 7 |  |
| 8. Water | 1. Polarity  
2. Acids and Bases  
3. pH  
4. Solutions  
5. Solubility  
6. Electrolyte vs. non electrolyte | 8 | Lab 15: Analysis of Vinegar  
Lab 20: Characterizing Acidic and Basic Materials  
Lab 21: Acid Rain |
| 9. Polymers and Plastics | 1. Monomer  
2. Polymer  
3. thermoset and thermoplastics  
4. intermolecular forces | 9 | Lab 25: Polymer Synthesis and Properties |
Target for Exam 3 (the take home) due Monday of Finals Week

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<tr>
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<tbody>
<tr>
<td>Limiting Reagent</td>
<td>Heating Curves</td>
<td>Chemical vs. Physical Change</td>
<td>Sugar Content</td>
<td>10</td>
<td>Lab 31: Measuring the Sugar Content of Beverages.</td>
</tr>
</tbody>
</table>

Specific Expectations for Dr. Fry’s courses/laboratories

1. Refer to Dr. Fry as Dr. Fry—not Mr. Fry.
   a. Since 2001, Dr. Fry has found that every student who call him Mr. Fry, has utterly failed the course. It is not that I fail them for this—rather the students do not understand that they are in college. Students who do not recognize that I understand chemistry a lot better than their high school teacher do not recognize that they have to study—and they fail.
   2. Pay attention DURING class!
      a. Dr. Fry has found that those students who pay attention in class tend to do their best. He has reached this same conclusion at the end of each semester since 2001—when he began teaching.
      b. Dr. Fry looks for understanding among the students as he presents the material. If you do not understand something often he is able to read your expression. As time allows, he can then explain the topic further. However, if you are not paying attention, Dr. Fry cannot do this.
      c. Do not have your cell phone out.
      d. Computers, tablets and other electronic devices are not allowed to be out during class time.
      e. Remember, that paying attention makes a difference. For most students (and everyone else) the cell phone represents the largest avoidable distraction. Exercise your self-control and do not look at your cell phone during class.
      f. Do not use your cell phone to take pictures of material in class including due dates. Instead write it down!
   3. Work the homework until you understand it.
      a. Dr. Fry has found that those students who do their homework until they understand it tend to do their best. He has reached this same conclusion at the end of each semester since 2001 when he began teaching.
      b. A lot of students mistake going through the homework with working it until you understand it.
   4. Do not talk while others are talking (or lecturing).
      a. Do not distract others (including Dr. Fry) from the course material.
   5. Come to class/lab prepared.
   6. Do not email Dr. Fry through the d2l system—he will not respond.
   7. Students are expected to check their sfa email on a regular basis. Dr. Fry often communicates important items to individual students via email. For instance, if you left your calculator in the classroom.
   8. Grades are not discussed immediately before or immediately after class. Instead, grades will be discussed during office hours. This prevents us arguing about a specific item in front of everyone in the class. Moreover, it gives us a chance to understand one another.
      a. After graded work is returned, you have a limited time to review it and find any problems. If you do find a problem, of something that you do not understand, see Dr. Fry in his office. In general, 1-2 class periods after something is handed back is an upper limit on regrading items.

Note: This syllabus is subject to change at the discretion of the instructor.