A. COURSE INFORMATION

Course number/section: CHEM1412.001
Class meeting time: MTWR 10:00AM-11:55AM
Class location: IH-162
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Jim Silliman, PhD
Office location: NRC 3503
Office hours: MTWR 4:00PM-5:15PM
Telephone: 361-825-3718
e-mail: james.silliman@tamucc.edu
Appointments: Email or call to schedule an appointment outside office hours

C. COURSE DESCRIPTION

Catalog Course Description
The continuation of CHEM 1411 - General Chemistry I, the foundation course in chemistry with emphasis on quantitative aspects. Laboratory involves development of basic skills. This course counts toward the natural science component of the University Core Curriculum. Prerequisite: CHEM 1411 - General Chemistry I and MATH 1314 - College Algebra or equivalent math competency.

D. PREREQUISITES AND COREQUISITES

Prerequisites
CHEM 1411
MATH 1314

Corequisites
None.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Recommended Textbook
Texas A&M University-Corpus Christi (Chemistry, The Molecular Nature of Matter and Change), by Silberberg/Amateis, 2018, Eighth Ed.
* Online access code not necessary.

Optional Textbook(s) or Other References
None.
Supplies
Scientific calculator.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT
Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

It is expected that after completion of CHEM 1412, students should be able to:
1. Understand the characteristics of equilibrium reactions.
2. Apply colligative properties to solutions.
3. Understand chemical kinetics.
4. Apply free energy relationships to chemical reactions.

G. INSTRUCTIONAL METHODS AND ACTIVITIES
Students will have a chance to learn from each other as they participate in in-class group assignments. Group assignments will complement the latest material covered in lecture and will challenge their grasp of general chemistry concepts.

H. MAJOR COURSE REQUIREMENTS AND GRADING
The average of 4 exam grades (including the final) and quizzes will determine the lecture grade. There will be regular homework assignments from each chapter during the semester. You must do the homework problems in order to perform well on exams and quizzes. Four 100-point exams, usually covering 2-3 chapters, are planned (including the final exam). Final letter grades for the lecture course will be assigned as follows: A: 90%, B: 80%, C: 70%, D: 60%, F: < 60%. When justified by the exam statistics and item analysis data, “curve” points may sometimes be added to every student’s final course average, “curving” grades up. Grades will never be “curved” down.

Course Grade: 25% of the general chemistry grade is from general chemistry lab. At the end of the semester, after completing all the lab assignments and exams, you will be assigned a lab grade by your lab instructor. All concerns about the lab grade should be directed to the lab instructor. You’ll receive more information about lab in the lab syllabus.

| Lecture Grade | Lecture % X 0.75 | 75 |
| Lab Grade     | Lab % X 0.25     | 25 |
| Course Grade  |                | 100 |
I. COURSE CONTENT/SCHEDULE

Tentative Schedule:

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>CHAPTER</th>
<th>EXAM</th>
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</thead>
<tbody>
<tr>
<td>Mon. 6/03/19</td>
<td>Intermolecular Forces</td>
<td>12</td>
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<tr>
<td>Tues. 6/04/19</td>
<td>Intermolecular Forces</td>
<td>12</td>
<td></td>
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<tr>
<td>Wed. 6/05/19</td>
<td>Properties of Mixtures</td>
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<tr>
<td>Thurs. 6/06/19</td>
<td>Properties of Mixtures</td>
<td>13</td>
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<tr>
<td><strong>Mon. 6/10/19</strong></td>
<td>Kinetics: Rates &amp; Mechanisms</td>
<td>16</td>
<td>Exam 1</td>
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<tr>
<td>Tues. 6/11/19</td>
<td>Kinetics: Rates &amp; Mechanisms</td>
<td>16</td>
<td></td>
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<tr>
<td>Wed. 6/12/19</td>
<td>Kinetics/Equilibrium</td>
<td>16/17</td>
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<tr>
<td>Thurs. 6/13/19</td>
<td>Equilibrium</td>
<td>17</td>
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<td><strong>Mon. 6/17/19</strong></td>
<td>Acid-Base Equilibria</td>
<td>18</td>
<td>Exam 2</td>
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<tr>
<td>Tues. 6/18/19</td>
<td>Acid-Base Equilibria</td>
<td>18</td>
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<tr>
<td>Wed. 6/19/19</td>
<td>Acid-Base Equilibria</td>
<td>18</td>
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<td>Thurs. 6/20/19</td>
<td>Ionic Equilibria</td>
<td>19</td>
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<td><strong>Mon. 6/24/19</strong></td>
<td>Ionic Equilibria</td>
<td>19</td>
<td>Exam 3</td>
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<tr>
<td>Tues. 6/25/19</td>
<td>Ionic Equilibria</td>
<td>19</td>
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<tr>
<td>Wed. 6/26/19</td>
<td>Thermodynamics</td>
<td>20</td>
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<tr>
<td>Thurs. 6/27/19</td>
<td>Thermodynamics</td>
<td>20</td>
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<tr>
<td>Mon. 7/01/19</td>
<td>Thermodynamics</td>
<td>20</td>
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<tr>
<td>Tues. 7/02/19</td>
<td>Nuclear Reactions</td>
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<tr>
<td><strong>Wed. 7/03/19</strong></td>
<td>Final Exam</td>
<td>12-24</td>
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Exam Schedule:  
Exam 1: Monday, 6/10/19 (10:00AM-11:00AM)  
Exam 2: Monday, 6/17/19 (10:00AM-11:00AM)  
Exam 3: Monday, 6/24/19 (10:00AM-11:00AM)  
Final Exam: Thursday, 7/03/19 (10:00AM – 11:55AM)
Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES

Attendance/Tardiness
The student is expected to arrive on time prepared to take notes and work on in-class problems with pen or pencil, paper, calculator and colored markers/pencils. If absent, it is the responsibility of the student to obtain missed information from a classmate. Missed information includes not only lecture notes, but also any possible information regarding syllabus changes.

Make-up Exams
There will be no make-up exams or quizzes for this class. If you miss one lecture exam, your final exam grade will be counted twice to replace the missed exam. This applies to ONE exam only. If you miss more than one, you will receive a zero for the additional missed exam(s). For those students who do not miss an exam, your final exam grade will be counted twice to replace your lowest exam grade (assuming that this improves your overall grade). Do not show up late to an exam, no student will be admitted to the exam after the first exam-taker has left.

Extra Credit
All extra credit is included on each exam and there will be an extra credit quiz offered during the semester.

Cell Phone Use
Before you enter the lecture hall turn OFF your cell phone! Beepers must also be turned off or put on silent mode. Electronic interruptions will NOT be tolerated! Cell phones must be put away and stored out of sight during all quizzes and exams or you will receive a zero!!

Laptop Use
You are welcome to use a laptop to take notes during class. Do not use it to check email, facebook, youtube videos, etc. These other uses are considered a distraction and you will be asked to leave.

Food in Class
Drinks and snacks are allowed. Do not bring in a meal – this is not a cafeteria.

Participation
You are expected to be attentive and participate in asking/answering questions and also in group assignments.
K. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards
as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- Disability Services
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

http://disabilityservices.tamucc.edu/

- Statement of Academic Continuity
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

L. OTHER INFORMATION

- Tutoring and Test Taking Strategies
  To be successful in this course, and most others, you must develop good note-taking skills, organization skills, study habits, and test-taking strategies from the very beginning. Your
instructor, seminar leaders and TA’s are always available for help, but don’t wait until it’s too late! It is important that you are aware that the Center for Academic Student Achievement in Room 216 of the library provides free tutoring, test-taking strategies, and extra help. Take advantage of this service! Should you have test anxiety, stress problems, or need help with study skills, the University Counseling Center (Driftwood 107: 825-2703) also provides a free service.

• Use of Electronic Devices During Exams
Any use of an electronic device (palm pilot, Cell Phone, MP3 player, CD player, computer …) during an exam is strictly prohibited. Any use of such a device will be considered an attempt to cheat on the exam and will result in a 0 on the exam although more severe actions may be considered. Calculators may be allowed on exams when needed, but only for mathematical operations. The use of programmable calculators to store or retrieve information during an exam will be considered an attempt to cheat on the exam. Also, if a calculator is discovered to have saved programs or information that could be used as an unfair advantage on the exam, this will be considered an attempt to cheat on the exam. Programs or operators that aid in mathematical operations such as a quadratic equation calculator may be used.

• Assigned Homework
The homework assignment for this class contains the minimum suggested amount of problems that you should work during the semester. The more problems you work, the more comfortable you will be with the subject….DO NOT GET BEHIND.

• Academic Advising
The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

GENERAL DISCLAIMER
I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.