Day/Time: MWF 11:00 am – 11:50 am  Place: JSC 233  CRN: 20211

Instructor Information:
Dr. Amy L. Rogers
E-mail: rogersaL@cofc.edu  Phone: 843-953-7292  Office: SSMB 308
Office Hours: Wednesdays 2:00 – 3:30 or by appointment

Course Description: This course is part of the Gen Ed sequence and is designed primarily for students who would like to major in a science related field. Students will gain fundamental knowledge of chemistry concepts as well as sharpen their problem solving skills. Students will use this content to build their chemical knowledge base as well as to appreciate how chemistry impacts our daily lives.

Prerequisite: Chemistry 111. Co-requisite: Chemistry 112L. If either one of CHEM 112 or 112L is dropped, then the other must be dropped.


General Education Student Learning Outcomes:
1. Students apply physical/natural principles to analyze and solve problems.
2. Students will develop an understanding of the impact that science has on society.
** (To be assessed during CHEM 112L - see later in Syllabus.) **

Learning Outcomes for CHEM 112:

- Describe colligative properties and give specific examples.
- Explain the concept of equilibrium and apply it to chemical reactions including acid/base chemistry, precipitation reactions, and oxidation-reduction reactions.
- Define entropy and Gibbs energy. Apply these with respect to chemical reactions and evaluate how these affect the spontaneity of a chemical or physical process.
- Apply a kinetic analysis to chemical and physical processes (including rates, mechanisms, and activation energy).
- Apply the principles of thermodynamics and equilibrium to electrochemistry.

Responsibilities: I am here to explain the material and help you to the best of my time and ability. However, the burden of learning is upon you, the student. It is expected that for every hour spent in lecture that you will spend a minimum of 2-3 hours of study. In order to succeed, it is necessary for the student to actively participate in learning. So, prepare for class every day. You will be asked to participate in the class discussions. You are always encouraged to ask questions and contribute ideas to class.

Honor Code: Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved. Incidents where the instructor determines the student’s actions are related more to a misunderstanding will be handled by the instructor. A written intervention
designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student’s file. Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student’s transcript for two years after which the student may petition for the X to be expunged. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration-- working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others’ exams, fabricating data, and giving unauthorized assistance. Projects conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

**Attendance Policy:** Attendance is expected at all classes. Students are responsible for all information presented in class. It is imperative that you attend class and also to arrive promptly. If you arrive late for a quiz, test, or the final exam, instructions will not be repeated nor will you receive additional time to complete the assignment. Please note that an Absence Memorandum from the Office of Undergraduate Studies only verifies your documentation for missing a class. It does not entitle you to make up or be excused from any work, assignment, quiz, or test. Any work missed due to an absence will be given a zero unless the absence is specifically excused by the instructor.

**OAKS:** Course material, study tools, and additional information will be provided for students on OAKS. You can access OAKS through the College of Charleston MyCharleston website. Go to https://my.cofc.edu/cp/home/displaylogin, login into MyCharleston using your system login ID and password. Once you are in the “MyCharleston system, click on OAKS icon at the top of the page, and you will be taken to the OAKS site.

**Tests (60% of grade):** There will be four (4) tests covering the material from the lectures and the text – see Schedule for dates and chapters covered. Tests that are missed cannot be made up and will count as zero. The only exception to this is if the student has a documented, justifiable excuse (as judged by the Instructor).

**Homework:** Homework will be assigned throughout the semester. Homework might be periodically graded but used mostly for discussion/calculation during class.
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General Education Learning Outcomes Assignment:
The Gen Ed assignment will be given during the lab co-requisite of this course. This assignment is given to assess the learning outcomes.

ALEKS Prep Assignment (5%): ALEKS is designed to help identify weak areas in your preparation for Chem 112. There are three parts, all of which must be completed to receive full credit. Directions on how to enroll in ALEKS can be found on OAKS. This assignment is due by Tuesday, January 23 by 11:00 pm.

Mystery Credit (10% of grade): Throughout the course there will be questions, assignments, participation etc. that will be graded and added to a Mystery Credit spreadsheet. Collectively this credit will be worth 5% of the overall grade. Students do not know which questions are used and how often questions are used. It is a complete mystery but will used to help determine level of commitment and effort given in the course.

Final Exam (25% of grade): The Final Exam will be held on Friday, April 27 at 12:00 pm in JSC 233. It will be a cumulative multiple choice American Chemical Society Standardized test. It is a timed test. Absence from the Final Exam will result in the grade of "X" being assigned which converts to an "F" within 48 hours unless an excused absence has been granted by the dean in the Office of Undergraduate Studies. Requests for an alternate Final Exam time must be processed through the Office of Undergraduate Studies no later than 5 p.m. on the last day of class.

Grading Weight:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Tests</td>
<td>60%</td>
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<tr>
<td>ALEKS Prep Assignment</td>
<td>5%</td>
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<tr>
<td>Mystery Credit</td>
<td>10%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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</tbody>
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Grading Scale:

- A: 92% & above
- A-: 90 - 91%
- B+: 87 - 89%
- B: 82 - 86%
- B-: 80 - 81%
- C+: 77 - 79%
- C: 72 - 76%
- C-: 70 - 71%
- D+: 67 - 69%
- D: 60 - 66%
- F: below 60%

SNAP: Any student eligible for and in need of academic adjustments or accommodations because of a disability is requested to speak with the professor during the first two days of class and to provide documentation indicating the Student’s registration in SNAP.

Electronics Device Policy: Devices whose usage is prohibited in class at any time are: pagers, radios, TV, CD, DVD, and MP3 players and similar devices. Devices that are allowed to be used at certain times during class, except during tests, exams and quizzes are laptops, handheld computers, cell phones, PDAs, electronic pens, calculators, and similar devices. The sound must be off unless otherwise specified by the instructor. During tests, exams, and quizzes no
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Electronic devices (except approved calculators) are allowed to be on or in sight, unless otherwise specified by the instructor.

Email: Email is considered an official method for communication at the College of Charleston. If a student wishes to have email redirected from their official college issued account to another email address, they may do so, but at their own risk. Having email redirected does not absolve the student from the responsibilities associated with official communication sent to his or her College account. Students are expected to check their CofC official email on a frequent and consistent basis in order to remain informed of College related communications. Checking email on a daily basis is recommended.

Tips For Success:  
• Attend all classes  
• Be an active learner  
• Put in 2-3 hrs/day for each lecture class period.  
• Read textbook & do homework problems after each lecture  
• Use resources to study – chapter study goals, class notes, sample problems, homework, end-of-chapter reviews, and key terms in textbook  
• When confused, ask for help – from instructor, friends, tutors  
• Stay Healthy

Important Dates to Remember:  
January 8  First day of classes  
January 15  MLK - No Classes  
March 13  Last day to withdraw from classes with grade of “W”  
March 18 -24  Spring Break  
April 23  Last day of classes  
April 27  Final Exam, 12:00 noon

Chapters of Study (in order of lecture). Test dates are TENTATIVE and can change.  

Test 1 (Monday, January 29):  
  Intermolecular Forces:  Chapter 7.3  
  Solutions:  Chapter 13

Test 2 (Friday, February 23):  
  Equilibrium:  Chapter 15  
  Solubility Equilibria Chapter 17.4 - 17.5  
  Acid/Base:  Chapter 16

Test 3 (Monday April 2):  
  Acid-Base Equilibria Chapter 17.1 – 17.3  
  Chemical Kinetics:  Chapter 19

Test 4 (Monday, April 23):  
  Entropy, Free Energy, and Equilibrium Chapter 14  
  Electrochemistry:  Chapter 18

Additional Material on Final:  
  Nuclear Chemistry Chapter 20