CHEM 1120
GENERAL CHEMISTRY II

Instructor Information:
Name:
Office phone:
Office location:
Office hours:
E-mail address:

Course Description
A continuation of CHEM 1110. Topics include solutions, acids and bases, chemical equilibrium, thermodynamics, kinetics, electrochemistry, oxidation and reduction reactions, nuclear chemistry and an introduction to organic chemistry.

Credit: 4 credits, 3 class hours, 3 lab hours
Prerequisite: CHEM 1110

Course Outcomes and Topics
Upon successful completion of this course, the students will:

- Identify the intra-and intermolecular forces; and the effects on properties.
- Write mathematically derived solutions to problems designed to illustrate the theory under study: colligative properties, kinetics, and equilibria.
- Identify acids, bases, and buffers; solve problems involving pH, buffers, hydroxide and hydronium ion concentrations.
- Identify the different ways of expressing concentration of a solution.
- Solve thermodynamic, electrochemistry, and nuclear chemistry problems.
- Define the main organic functional groups.

Lecture Topics
- Intermolecular forces
- Liquids
- Solids
- Solutions
- Colligative properties
- Kinetics
- Equilibrium
- Le Chatelier’s Principle
- Acid-base Equilibria
- Common-ion effect and Buffers
- Titrations
- Solubility Equilibria
- Thermodynamics
- Electrochemistry
- Nuclear Chemistry
- Introduction to Organic Chemistry

Lab Topics:
- Intermolecular Forces
- Colligative Properties & Freezing Point
- Chemical Equilibrium
- Chemical Kinetics
- Acid/Base Dissociation Constants
- Titration curves
• Soaps and Detergents
• Quantitative Analysis of Metal Cations
• Qualitative Analysis of an Anion

• Electrochemical Reactions
• TLC Analysis of Methyl esters

**Required Materials**


OR


AND

- *Experiments for General Chemistry II – Laboratory Manual for CHEM 1120, 5th Edition* (Freely available in the NSOnline course shell)

- Scientific Calculator

**Course Policies**

**Attendance Policy**
A student is expected to attend all scheduled classes and laboratories. Absences in a course may affect a student’s final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student’s final grade.

**Assessment and Grading (Subject to change at the instructor’s discretion methods of evaluation)**
The expected outcomes for the course may be assessed by various techniques including homework, quizzes, exams and a comprehensive final examination as well as lab related activities and students presentations.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PERCENTAGE OF FINAL GRADE</th>
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</thead>
<tbody>
<tr>
<td>Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Exams</td>
<td>40%</td>
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<tr>
<td>Final Exam</td>
<td>15%</td>
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<tr>
<td>Lab Grade (Includes students presentations)</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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</tbody>
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**Grading scale:**

- A: 90 – 100%
- B: 80 – 89%
- C: 70 – 79%
- D: 60 – 69%
- F: 0 – 59%
- FA (see below)
- FN (see below)
Per TBR policy, a student who does not officially drop or withdraw from a course, but receives a failing grade, will receive an “FA” if the last day of attendance was earlier than two-thirds into the part-of-term. That date equates to the last day to withdraw from the course.

An FN is awarded to students who never attended class.

**Homework**

Homework problems (100 pts for each chapter) assigned using the Mastering Chemistry online assignment system and each student will be responsible for completing the assigned problems. You have unlimited time and unlimited attempts to work the problems but **homework will be due the day of the exam covering that material**. This deadline will not be extended. In order to receive the maximum points for the online homework problems the student must complete a minimum of 90% of the questions for each section. Points will be prorated for any percentage below the required 90% completion. It is in your best interest to do all problems to obtain the maximum understanding of the material. Also, do not click the "Give Up" button for a problem unless you are completely wanting to give up on that problem. Clicking "Give Up" will show you the answer but then lock you out from getting any more points on that question.

**Quizzes**

Ten Quizzes (10 pts each) are given during the first twenty minutes of the class time and can consist of questions relating to the lecture material covered on each chapter.

**Exams**

Three tests (100 pts each) will be given during the semester along with a comprehensive final (100 pts). The date of each test will be given in class no later than one week before the test will take place. **The final exam for this course is scheduled for in room**.

**Laboratory**

The Laboratory portion of the course will be graded on three different parts: Pre-lab questions (5 pts each), a laboratory worksheet (10 pts each) and post-lab questions (5 pts each). For each lab there will be a set of pre-lab questions related to the lab procedure and content to be completed prior to attending lab. You will have an unlimited number of times to answer these pre-lab questions. These pre-lab questions can be found on the NSOnline site for the course under the “Quizzes” section. During lab you will perform an experiment, collect data and report your findings on the laboratory worksheet pertaining to the lab. This worksheet is due before leaving the lab. After the completion of the lab, there will be a set of post-lab questions to be answered relating to the lab material. You will have two chances to answer these questions. These post-lab questions can be found on the NSOnline site for the course under the “Quizzes” section and will be due on the day of the next lab meeting.

**Makeup Policy**

All assignments must be turned in by or before the due date. There are NO EXCEPTIONS. Makeup exams will NOT be given except in the case of extenuating circumstances. It is the responsibility of the student to attend class and take exams at the designated times. Exams, Labs, Homework and Quizzes cannot be made-up. To compensate for a missed exam or lab, the score received on the final exam can be used to replace the lowest score received on one regular exam. Also, the lowest
Pre-Lab and Post-lab scores will be dropped along with your lowest Lab worksheet score and in-class quiz score.

**Grading Errors**
All grades will be entered in D2L grade sheet. It is your responsibility to check your grade online and let me know if any error has made. If the student thinks that the instructor has made an error in his/her grade, please submit in writing (an email is fine) the reason(s) why the student thinks he/she deserves more credit along with the assignment. This request must be turned in within one week of the assignment having been returned to the student.

**Help Opportunities**
You are encouraged to work problems on a regular basis, and to stop by my office should you experience any difficulty or have any general questions. I also encourage you to email me questions or requests for meeting times.

**Safety Issues**
The instructor will go over new regulations regarding safety in lab classes. You must turn in a signed copy of the regulations, and you will have a copy to keep.

“**Food and drink of any type is not permitted in the lab classrooms.**
Any student found with food or drink in the lab room will be asked to immediately leave the room and will receive a grade of “0” for that day’s lab activity.”

**D2L Brightspace/NSOnline and myNSCC email**
It is the student's responsibility to check D2L and MyNSCC email on a regular basis. These are the official communication channels between the college and students. Students are responsible for the information communicated through those channels. D2L contains specific course information and MyNSCC contains information important for other purposes.

**Technology Statement**
Nashville State’s classes are considered to be web-enhanced. Faculty have an expectation that students will use a computer and the Internet to complete assignments, engage in online discussions, and access various course materials through Desire2Learn (D2L) course shells. Computers are available for student use at each campus during campus open hours.

**ADA Compliance Statement**
Nashville State complies with the Americans with Disabilities Act. If you wish to request any special accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3741 or 615.353.3721.

**Classroom Misconduct**
Nashville State Community College has a zero tolerance policy for disruptive conduct in the classroom. Students whose behavior disrupts the classroom will be subject to disciplinary sanctions. The Nashville State Student Code of Conduct policy is available at http://www.nscc.edu/content/resources/Student_Code_of_Conduct_Policy.pdf.

Please be aware that children are not allowed in class or unattended on campus.
**Academic Misconduct**
Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. Students are responsible for understanding and aiding by the Academic Misconduct Policy in the Nashville State Student Code of Conduct that can be found at http://www.nscc.edu/content/resources/Student_Code_of_Conduct_Policy.pdf.

In addition to other possible disciplinary sanctions that may be imposed through regular college procedures as a result of academic dishonesty the instructor has the authority to assign an “F” or a “Zero” for the exercise, paper, or examination or to assign an “F” for the course. Students may appeal through the appropriate college grade appeal procedures.

**Academic Early Warning System**
Nashville State Community College has implemented an Early Warning System to notify students via e-mail about academic problems such as poor classroom attendance, poor performance on assignments/tests, poor communication skills, late/missing assignments, and/or lack of classroom participation. *Please note that Early Warning Alerts do not affect a student’s academic standing.

**RAVE Emergency Alert System**
Emergency events can happen at any time and Nashville State Community College wants to be able notify students if and when they occur. For this reason, all students have been enrolled in the free RAVE alert system. If you have not already done so, please log in at https://getrave.com/login/nscc to confirm and update your contact information and notification preferences. It is critical that your information be correct so that you will receive any emergency notifications. Your RAVE Username is your NSCC email address. If you've never received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you. Should the RAVE system indicate “user not found”, select Register and create your own RAVE account.

**Inclement Weather Policy**
Nashville State will use the RAVE alert system to send a text message to students, staff, and faculty about adjusted hours of operation and/or closings at individual campuses. All students should check the Nashville State web site home page at www.nscc.edu for announcements on campus closures, which may vary from campus to campus. Campus closures will also be announced on local television stations.

When classes are cancelled, an online assignment will be posted in NS Online. Check NS Online for a message from your instructor regarding your online assignment requirements.

Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.

**Class Cancellation Policy**
If the class is cancelled, the instructor will notify all students by posting in the NSOnline/D2L course, e-mailing through NSOnline/D2L, and/or by posting a sign on the classroom door. In the event of class cancellation, students must access NSOnline/D2L to complete classwork and the assignment that will be posted in the course D2L site.