Instructor: Dr. BettyCep Gailbreath  E-mail: gailbreathbd@cofc.edu  
Office: SSMB Rm 114  Phone: 953 – 3093  
Office Hours:  T&R: 10:50 -12:00 am; and T: 1:30 to 2:10 pm; or by appointment  
Course Title: CRN 11124  CHEM 111–08  Principles of Chemistry  3 credits – 3 hours  
Course Info:  TTh: 9:25 am – 10:40 am  Rm: School of Science and Math Building  Rm 138  
Required Text: General Chemistry: Atoms First 3rd Edition  Authors: Burdge, Julia and Overby, Jason  

Information in this syllabus can change with appropriate notice.  

<table>
<thead>
<tr>
<th><strong>Basic Information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Description</strong></td>
</tr>
<tr>
<td><strong>Course Co/ Pre-requiresties</strong></td>
</tr>
<tr>
<td><strong>Class Preparation</strong></td>
</tr>
<tr>
<td><strong>Highly Recommended Texts</strong></td>
</tr>
<tr>
<td><strong>McGraw-Hill Website</strong></td>
</tr>
<tr>
<td><strong>Supplemental Material</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>General Education Student Learning Outcomes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Students apply physical/natural principles to analyze and solve problems.</td>
</tr>
<tr>
<td>• Students will develop an understanding of the impact that science has on society.</td>
</tr>
<tr>
<td>The general education learning outcomes will be assessed in the second course of this General Education Sequence, Chem 112L</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Student Learning Outcomes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Describe how to employ the scientific method</td>
</tr>
<tr>
<td>• Solve chemistry problems by employing mathematical techniques and chemical reasoning</td>
</tr>
<tr>
<td>• Understand how atoms interact to form molecules and compounds</td>
</tr>
<tr>
<td>• Identify the properties of compounds</td>
</tr>
<tr>
<td>• Employ an understanding of chemical reactivity to analyze chemical reactions</td>
</tr>
</tbody>
</table>
## Important Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tues. Aug. 21</td>
<td>First Day of Class</td>
</tr>
<tr>
<td>Monday, Aug. 27</td>
<td>Last Day to Drop/Add Course</td>
</tr>
<tr>
<td>Tues. Sept. 11</td>
<td></td>
</tr>
<tr>
<td>Tues. Oct. 2</td>
<td>Exam # 1</td>
</tr>
<tr>
<td>Wed. Oct. 17</td>
<td>Midterm Grades Available</td>
</tr>
<tr>
<td>Wed. Oct. 24</td>
<td>Last Day for students to withdraw with a grade of “W”</td>
</tr>
<tr>
<td>Thurs. Oct. 25</td>
<td>Exam #3</td>
</tr>
<tr>
<td>Mon., Tues, Nov. 5, 6</td>
<td>Fall Break</td>
</tr>
<tr>
<td>Tues. Nov. 20</td>
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</tr>
<tr>
<td>Wed. – Fri. Nov. 21-23</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>Thu. Nov. 29</td>
<td>Last Day of Class</td>
</tr>
<tr>
<td>Tues. Dec. 4</td>
<td>Reading Day</td>
</tr>
<tr>
<td>Tues. Dec. 11</td>
<td>Final Exam at 8:00 am ACS exam 110 minutes, in SSMB Rm 138</td>
</tr>
<tr>
<td>Fri. Dec. 14</td>
<td>Final Grades Available</td>
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## Topics Covered in 111

<table>
<thead>
<tr>
<th>Chapters in Textbook</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>Chapter 1</td>
<td>Chemistry: The Science of Change</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Atoms and the Periodic Table</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Quantum Theory and the Electronic Structure of Atoms</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Periodic Trends of the Elements</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Ionic and Covalent Compounds</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Representing Molecules</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>Molecular Geometry, Intermolecular Forces, and Bonding Theories</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Chemical Reactions</td>
</tr>
<tr>
<td>Chapter 9</td>
<td>Chemical Reactions in Aqueous Solutions</td>
</tr>
<tr>
<td>Chapter 10</td>
<td>Energy Changes in Chemical Reactions</td>
</tr>
<tr>
<td>Chapter 11</td>
<td>Gases</td>
</tr>
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</table>
Grade Policy and Evaluation of Student Performance

<table>
<thead>
<tr>
<th>Student Work</th>
<th>Grade Percentage</th>
<th>Description and Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>20%</td>
<td>5% - Online preparatory assignment due <strong>Wednesday, Aug. 29th at 11:00 pm</strong>. 10% - There will be 4 take home quizzes that will be given throughout the semester. It will be due a week later. There are no make-up quizzes. If you are not in class to turn the quiz in then you can turn it in early to me or have someone else turn it in at the beginning of class. I will not accept late quizzes. 5% - In-class quizzes. You will need to be present. No make-up in-class quizzes will be given. I will drop the 2 lowest in-class quiz scores.</td>
</tr>
<tr>
<td>Exams</td>
<td>60%</td>
<td>Four 1 hour and 15 minute exams are scheduled during the semester. Dates are on the course schedule. The lowest exam grade will be replaced with the final exam grade if it is higher or if you missed an exam.</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
<td>The final exam is scheduled during the time assigned for the class meeting day and time (See important dates section). The Final Exam will be a cumulative 110 minute multiple choice American Chemical Society Standardized test which has been written by a board of chemistry professors who are members of the American Chemical Society. Material from the laboratory course may also be included.</td>
</tr>
</tbody>
</table>

“Make-Up” Policy

**Quizzes** - There are no excuses or make-ups for missed quizzes or online work under any circumstances.

**Exams** – There are no make-up exams for missed exams under any circumstances. If you have an emergency that is documented with a note from the Absence Memo Office (located 67 George Street) or a note from a medical doctor, you may be excused from one exam, meaning your final exam grade will count as your missed exam grade. Contact me as soon as possible. Any additional missed exams are assigned a grade of zero regardless of the reason.

Final Exam Policy

Requests for an alternate final exam must be processed through the Office of Undergraduate Academics no later than 5 p.m. on the last day of class. 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. The acceptable reasons for missing examinations are illness of the student or circumstances beyond the student’s control. These reasons must be properly documented. See the sections entitled “Final Examinations” in the Undergraduate Catalog for more information.

**Calculation of Grade Percentage**

\[
\text{Grade Percentage} = 0.20 \times \text{Quizzes avg} + 0.60 \times \text{Test avg} + 0.20 \times \text{Final}
\]

Before the Final Exam: \[
\text{Grade Percentage} = \frac{0.20 \times \text{Quizzes avg} + 0.60 \times \text{Test avg}}{0.80}
\]

**Assignment of Grades**

<table>
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<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
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<td>93.0 – 100.0</td>
</tr>
<tr>
<td>A-</td>
<td>90.0 – 92.9</td>
</tr>
<tr>
<td>B+</td>
<td>87.0 – 89.9</td>
</tr>
<tr>
<td>B</td>
<td>83.0 – 86.9</td>
</tr>
<tr>
<td>B-</td>
<td>80.0 – 82.9</td>
</tr>
<tr>
<td>C+</td>
<td>77.0 – 79.9</td>
</tr>
<tr>
<td>C</td>
<td>73.0 – 76.9</td>
</tr>
<tr>
<td>C-</td>
<td>70.0 – 72.9</td>
</tr>
<tr>
<td>D+</td>
<td>68.0 – 69.9</td>
</tr>
<tr>
<td>D</td>
<td>66.0 – 67.9</td>
</tr>
<tr>
<td>D-</td>
<td>65.0 – 65.9</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 65</td>
</tr>
<tr>
<td>Class Policy</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td><strong>Attendance Policy</strong></td>
<td>I expect all students to be on time and attend every class meeting. Note that missing 10% or more of the scheduled classes is excessive whether it is excused or unexcused. This can affect your grade. If more then three absences are recorded then a WA can appear as your midterm grade or final grade. If you must be absent for a good reason (illness, emergency, etc.), please discuss the absence with me at your earliest opportunity or e-mail me. Students are responsible for all information presented in class whether they are present or not. Students should obtain notes from a classmate and read the associated material in the text BEFORE they meet with me to ask questions about material missed. Please note that an Absence Memorandum from the Absence Memo Office (located 67 George Street) only verifies your documentation for missing a class. It does not entitle you to make up or be excused from any work, assignment or test. If you are a student-athlete or away from class due to college-related business, an accommodation will be made as long as you make arrangements BEFORE your absence.</td>
</tr>
<tr>
<td><strong>Student Responsibility</strong></td>
<td>You are responsible for all material covered or assigned in class or assigned via OAKS. You should check OAKS at least every other day for any updates. Power points, highly recommended homework assignments, worksheets and more will be found on OAKS. It is of the upmost importance that you keep current in your studies. You are expected to spend a minimum of 3 hours of study for every hour spent in lecture. The instructor is here to explain the material and help you to the best of her time and ability. However, the burden of learning is upon you, the student, which includes making use of tutors and office hours. Homework will be assigned but not be graded. The problems are representative of what you need to know for the quizzes and exams. The key to success in this class is working through chemistry problems again and again.</td>
</tr>
<tr>
<td><strong>Academic Integrity</strong></td>
<td>Students in this class must know, observe, and not compromise the principles of academic integrity. It is not permissible to cheat, to copy data or calculations from another student in class, to fabricate or falsify information, to submit the same academic work in more than one course without prior permission, to plagiarize, to receive unfair advantage, to otherwise abuse accepted practices for handling and documenting information or other violations described in the Student Handbook. This course is conducted under the Honor Code of the College of Charleston (see <a href="http://studentaffairs.cofc.edu/honor-system/">http://studentaffairs.cofc.edu/honor-system/</a>) and the department’s Policy on Scientific Integrity (see <a href="http://chemistry.cofc.edu/documents/Scientific_Integrity_2011.pdf">http://chemistry.cofc.edu/documents/Scientific_Integrity_2011.pdf</a>). If you are caught cheating, you will automatically receive a grade of XF for the course, and you will be brought before the Honor Board.</td>
</tr>
<tr>
<td><strong>Electronics Device Policy</strong></td>
<td>Devices that are prohibited in class at any time are: computers, pagers, cell phones, radios, TV, CD, DVD, and MP3 players and similar devices. Keep these devices off and out of sight. During tests, exams, and quizzes, no electronic devices are allowed to be on or in sight, unless otherwise specified by the instructor. The use of any wireless communication device during a quiz, test, or final exam is prohibited and will be considered a violation of the Honor Code.</td>
</tr>
<tr>
<td><strong>Calculators</strong></td>
<td>A calculator that performs exponential and logarithmic functions is required. You will need to bring it to ALL class meetings. No programmable calculators will be allowed on exams. A TI-30X is recommended. It is considered cheating to use a calculator that has stored text or equations in it on a test or quiz. No cell phone calculators, computers or calculator type watches. Sharing a calculator with another student during a quiz or exam is not allowed.</td>
</tr>
<tr>
<td>Homework</td>
<td>It cannot be over emphasized that homework is the “heart” of this course. You cannot effectively learn the subject matter without at least attempting to do the homework; which in theory should help you immensely in preparing for the take home quizzes and exams. Seeing problems reviewed in class is not the same as working them your self. These problems are assigned from out of the text or from the supplemental materials, and are for your benefit. While the homework assignments will not be collected and graded; the exams will be partially drawn from these problems. You should practice working problems regularly; leaving all of your studying until the last minute is not likely to result in a passing grade.</td>
</tr>
</tbody>
</table>
| E-mail | • This is the best way to contact me. It is usually checked between 9:00 am and 5:00 pm on weekdays. If you don’t receive a response from me during those times that means I DID NOT receive your e-mail, so try again.  
• Email is considered an official method for communication at the College of Charleston. Email accounts are automatically assigned to all students upon acceptance at the College (e.g. your @g.cofc.edu account). If a student wishes to have email redirected from their Official College issued account to another email address (e.g. @hotmail.com, @yahoo.com, or any other server), 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. The College is not responsible for the handling of email by outside venders or unofficial servers. Students are expected to check their College of Charleston official email on a frequent and consistent basis in order to remain informed of College related communications.  
• Students have the responsibility to recognize that certain communications may be time-critical. “I didn’t check my email”, error in forwarding email, or email returned to the College with “Mailbox Full” or “User Unknown” are not acceptable excuses for missing official College communications via email. |
| SNAP | Students Needing Access Parity – If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please feel free to come and discuss this with me during my office hours. You will need to have a letter from the SNAP office and contact me within two weeks from the start of the semester. Extended time on tests will only be allowed if arrangements are made in advance and will only be allowed at the testing center at Disability Services. If you have a disability and do not have a letter, please contact the Center for Disability Services / SNAP office located on the first floor of the Lightsey Center, Suite 104. (http://disabilityservices.cofc.edu/) |
| Other | The Chemistry and Biochemistry has a facebook page and uses it to announce opportunities for their students. Chem and BioChem at the College of Charleston is the name. |
### Tentative Schedule - Fall 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 21, 23, 28</td>
<td>1, 2</td>
</tr>
<tr>
<td>Aug. 30 Sept. 4, 6</td>
<td>3</td>
</tr>
<tr>
<td>Sept. 11</td>
<td>Exam # 1 Chap. 1, 2, and part of 3</td>
</tr>
<tr>
<td>Sept. 13, 18</td>
<td>rest of Chap. 3</td>
</tr>
<tr>
<td>Sept. 18, 20</td>
<td>4</td>
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<tr>
<td>Sept. 20, 25, 27</td>
<td>5</td>
</tr>
<tr>
<td>Oct. 2</td>
<td>Exam # 2 Rest of Chap. 3, Chap. 4 and 5</td>
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<tr>
<td>Oct. 4, 9</td>
<td>6</td>
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<tr>
<td>Oct. 9, 11, 16</td>
<td>7</td>
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<tr>
<td>Oct. 16, 18, 23</td>
<td>8</td>
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<tr>
<td>Oct. 25</td>
<td>Exam # 3 Chap. 6, 7, and 8</td>
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<td>Oct. 30, Nov. 1</td>
<td>9</td>
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<tr>
<td>Nov. 6</td>
<td>Fall Break</td>
</tr>
<tr>
<td>Nov. 8, 13, 15</td>
<td>9, 10</td>
</tr>
<tr>
<td>Nov. 20</td>
<td>Exam # 4 Chap. 9, 10</td>
</tr>
<tr>
<td>Nov. 21 - 23</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>Nov. 27, 29</td>
<td>11, 12 and Review</td>
</tr>
<tr>
<td>Tues. Dec. 11</td>
<td>ACS Final Exam 8:00 am – 11:00 SSMB Rm 138</td>
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<tr>
<td></td>
<td>110 minutes exam</td>
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# Periodic Table of the Elements

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<thead>
<tr>
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<tr>
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<td>222.00</td>
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<td>Pa</td>
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<td>Np</td>
<td>237.00</td>
<td>94</td>
<td>Pu</td>
<td>244.00</td>
<td>95</td>
<td>Am</td>
<td>243.00</td>
<td>96</td>
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| 58 | Ce | 140.11 | 59 | Pr | 140.91 | 60 | Nd | 144.24 | 61 | Pm | 145.01 | 62 | Sm | 150.41 | 63 | Eu | 152.00 | 64 | Gd | 157.25 | 65 | Tb | 158.93 | 66 | Dy | 162.50 | 67 | Ho | 164.93 | 68 | Er | 167.25 | 69 | Tm | 168.93 | 70 | Yb | 173.00 | 71 | Lu | 175.00 |
| 90 | Th | 232.03 | 91 | Pa | 231.03 | 92 | U | 238.03 | 93 | Np | 237.03 | 94 | Pu | 244.03 | 95 | Am | 243.03 | 96 | Cm | 247.03 | 97 | Bk | 251.03 | 98 | Cf | 252.03 | 99 | Es | 253.03 | 100 | Fm | 257.03 | 101 | Md | 258.03 | 102 | No | 259.03 | 103 | Lr | 262.03 |