Syllabus
General Chemistry Lab – CHEM 101L – Fall 2015

LAB SCHEDULE – all sections in Rm 125 SSMB

<table>
<thead>
<tr>
<th>CRN</th>
<th>Sec</th>
<th>Day</th>
<th>Time</th>
<th>Instructor</th>
<th>email</th>
</tr>
</thead>
<tbody>
<tr>
<td>10242</td>
<td>01</td>
<td>T</td>
<td>1:00 pm-4:00 pm</td>
<td>Neal E Tonks</td>
<td><a href="mailto:tonksn@cofc.edu">tonksn@cofc.edu</a></td>
</tr>
<tr>
<td>10244</td>
<td>02</td>
<td>T</td>
<td>4:00 pm-7:00 pm</td>
<td>Tom Gurley</td>
<td><a href="mailto:tgurley@manningwood.com">tgurley@manningwood.com</a></td>
</tr>
<tr>
<td>10245</td>
<td>03</td>
<td>T</td>
<td>7:15 pm-10:15 pm</td>
<td>Tiffany Rush</td>
<td><a href="mailto:claryT@cofc.edu">claryT@cofc.edu</a></td>
</tr>
<tr>
<td>10246</td>
<td>04</td>
<td>R</td>
<td>7:00 pm-10:00 pm</td>
<td>Tiffany Rush</td>
<td><a href="mailto:claryT@cofc.edu">claryT@cofc.edu</a></td>
</tr>
<tr>
<td>10247</td>
<td>05</td>
<td>R</td>
<td>12:15 pm-03:15 pm</td>
<td>Paul A Sessa</td>
<td><a href="mailto:sessap@cofc.edu">sessap@cofc.edu</a></td>
</tr>
<tr>
<td>11732</td>
<td>06</td>
<td>R</td>
<td>3:30 pm-6:30 pm</td>
<td>Paul A Sessa</td>
<td><a href="mailto:sessap@cofc.edu">sessap@cofc.edu</a></td>
</tr>
</tbody>
</table>

Prelab classrooms differ by section, your instructor will contact you concerning where to meet.

**Description:** Chemistry lab is an exciting and fun experience when carried out in a safe and knowledgeable manner. Our goal is to increase your enthusiasm, to better your laboratory technique, and to supplement the information gained in lecture. You are expected to come to each lab on time and be prepared to carry out the day’s tasks. The 1-credit lab course is a co-requisite of the 3-credit lecture course. Should either course be dropped, both must then be dropped.

**In this course you will be mastering the following goals:**

**CHEM 101 Lab Technical Learning Outcomes:**

- Describe the safety strategy learned in this course and how following that strategy facilitates safe behavior in everyday life.
- Describe how to properly take measurements, record data, perform calculations, analyze results, and summarize findings in simple experiments.
- Determine fundamental physical and chemical properties of chemical compounds.

**General Education Learning Outcomes:** While there are specific technical objectives for this class, there are also additional goals that need to be addressed that tie the material to the school wide general education goals so that:

- Students can apply physical and natural principles to analyze and solve problems,
- Students will develop an understanding of the impact that science has on society.

General Education Learning Outcomes are assessed in the second semester of the two course sequence. This course is part of a larger educational experience, and as such we will attempt to align the course with the overall vision for the college whose purpose states we should pursue and share knowledge through study, inquiry and creation in order to empower the individual and enrich society.
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**Materials Provided By Student:**  
2) approved safety gloves (nitrile)  
3) lab coat  
4) calculator.  
5) lab 9-12 printouts from OAKS, needed week 10/26

**Safety:** Safety is of prime concern for the sake of each participant in the lab. Our **Strategy for achieving safe behavior** is:  
1. Know & follow the Safety Rules;  
2. Look for & recognize safety hazards  
3. Take proactive steps to minimize the risk of injury from the hazards.  

Each Student is responsible for the following:  
1. Starting the 1st week of lab (Aug 25-27), Students MUST come to every lab properly dressed – including long pants, closed toed shoes, and lab coats. **If you do not complete the safety training you will not be allowed back in lab.**  
2. Read, understand, and follow the School of Sci & Math’s **Safety Policy & Procedures** which are reviewed by the Instructor during the 1st week of lab (Aug 25-27) and posted on OAKS or provided as a handout. The link for the Safety PowerPoint Presentation covered in the first lab period can be found on the chemistry department resource page under the Laboratory Safety section at “General Lab Safety(101, 102, 111, 112, 191): http://chemistry.cofc.edu/resources/index.php  
3. Complete the take-Safety Quiz (Quiz 1) and return it the 2nd week of Lab (Sept. 1-3). Students who have not completed the safety quiz by the 2nd week of lab will not be allowed to enter lab.  
4. Identify physical and chemical hazards in each experiment and proactively take action to reduce the risk of injury (see more under Schedule below).

Unsafe behavior, including failure to wear safety goggles, may result in expulsion from the laboratory and possible expulsion from the course. Expulsion from the lab will result in the grade of ZERO for that experiment. Two expulsions will result in an automatic “F” for the course. In case of an emergency evacuation of the School of Science & Mathematics Building, all students in this class MUST REPORT to the front entrance of the Addlestone Library so that roll can be taken. The Library is on Calhoun St. directly across from the School of Science and Math Building. Since peoples’ lives are potentially at stake, a student’s failure to report for this roll will result in a grade of zero for that day’s lab report and a grade of zero for the semester deportment grade.

**Attendance:** Attendance to your section of scheduled lab is required. The grade of "WA" will be used in this course for any student who misses more than three laboratory periods. Students who miss quizzes or labs (including the final exam lab) will be given a grade of "0" for the associated evaluations. You are responsible for learning the required material and performing the required experiments. If you miss a lab due to illness or without prior approval from your instructor you will not be allowed to make up the missed lab. However, if you have a planned absence (due to your official representation of the College off-campus or for another reasonable cause) please let
your instructor know well in advance and we will work with you to try to make an accommodation that will allow you to make up the missed lab. In the case of an unusual conflict, lab may be performed by the student during another lab section during THE SAME WEEK if approved in advance by the instructor(s). You may not make up labs due to illness or unscheduled absences. When your final course grade is calculated, your lowest grade in each category will be dropped. With the exception of the final lab, if you miss a lab, grades associated with that one missed lab will become your dropped grade. If you miss a second lab, grades of “0” will be averaged in to determine your course grade. For an excused/missed quiz, the instructor will assign a grade for the missed quiz equal to the Student’s grade on the Final Exam.

**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 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. For this particular laboratory, students will be allowed to ask questions of the instructor and to collaborate with other students on the lab experiment during the lab period. The Student must read, sign and return by the 2nd week of lab the hand-out on *Policy of Scientific Integrity*. Please consult the instructor if you have any questions about the *Honor Code or Policy on Scientific Integrity*.

**Schedule:** The Student should refer to the schedule shown below to determine the required experiment number(s) and Pre-Lab assignment for each week and quiz schedule. It is the Student’s responsibility to come to lab prepared by reading and understanding the entire lab assignment (Discussion/ Procedure/ Report) and by completing the Pre-Lab assignment. To further prepare for each lab experiment, the Student will add the following exercise to each Pre-Lab assignment starting the 2nd week of lab (Sept. 1st):

1. Identify three (3) physical or chemical hazards the Student may encounter in the experiment of the day.
2. Briefly explain how the Student can minimize the risk to each of the three identified hazards.
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Lab Reports: The completed Pre-lab assignment must be initialed by the instructor prior to the start of lab; otherwise, the Student will not be allowed to conduct the lab exercise. The student must write his/her lab station number next to his/her name and partner’s name(s) at the top of page 1 of the report. The complete lab report is due by the end of each lab. The Student will staple together and hand-in the completed lab report to the instructor who will inspect the Student's work-area prior to the student leaving lab. No late lab reports will be accepted.

Quizzes: There will be four regularly scheduled quizzes (see attached schedule). Quizzes will be given at the beginning of the lab period. If a Student has a scheduled conflict, the Student may request the instructor to take the quiz early. Missed quizzes cannot be made up for any reason (see Attendance policy above). Discussing Quiz questions with students from another section prior to them taking the Quiz is a violation of the Honor Code and strictly prohibited.

Final Exam: The final exam will cover all the subject matter included in the course this semester. It will be a departmental exam that will include 50 multiple choice questions. There may be a lab practical section for the lab. The exam is scheduled for the last week of lab at the regularly scheduled time for each lab section. Discussing Final Exam questions with students from another section prior to them taking the Exam is a violation of the Honor Code and strictly prohibited.

Deportment: Proper deportment in lab is required to ensure a safe, effective and enjoyable lab experience for all. Deportment encompasses safe behavior, lab cleanliness, preparation for lab, promptness, lab report neatness and respect for others. The Student will begin the semester with a grade of “80” for deportment. The grade will be adjusted down for offenses to proper lab deportment. Up to 20 points will be added to the Deportment grade when the Student successfully completes their assigned general lab clean-up duties.

OAKS: The Student is expected to check OAKS to access the course syllabus and schedule. The Student can access OAKS through the main College of Charleston web site.

SNAP (Special Needs Advising Plan): Any student eligible for and needing academic adjustments or accommodations because of a disability is requested to speak with the professor in a timely manner so that your needs can be addressed. The student must provide the instructor a copy a letter from the SNAP office indicating the student’s registration in SNAP.

Grading Scale: 93 - 100 A  90 - 92 A-
87 - 89 B+  83 - 86 B
80 - 82 B-
78 - 79 C+
75 - 77 C
73 - 74 C-
72 D+
71 D
70 D-
Below 70 F

Grading Scheme: Lab Reports 60% Deportment 5%
Quizzes 10% Final Exam 25%
Total 100%
# Syllabus

**General Chemistry Lab – CHEM 101L – Fall 2015**

## Lab Schedule

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<thead>
<tr>
<th>Date</th>
<th>Pre-Lab Assignment*</th>
<th>Laboratory Exercise</th>
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<tbody>
<tr>
<td>Week 8/25</td>
<td></td>
<td>Orientation/Syllabus/Safety Exp #1 – Chemistry &amp; Measurement</td>
</tr>
<tr>
<td>Week 9/1</td>
<td>Return take-home Safety Quiz 1 Exp #2 Pre-Lab pg 11-17 Exp #3 Pre-Lab pg 23-29</td>
<td>Exp #2- Conversion Factors &amp; Problem Solving Exp #3 – Density &amp; Specific Gravity</td>
</tr>
<tr>
<td>Week 9/8</td>
<td>Exp #6 Pre-Lab pg 61-67</td>
<td>Exp #6 – Atoms &amp; Elements</td>
</tr>
<tr>
<td>Week 9/15</td>
<td>Prepare for Quiz 2 Exp #7 Pre-Lab pg 73-79</td>
<td>Quiz 2 – Exps 1, 2 &amp; 3 Exp 7 – Electronic Configuration &amp; Periodic Properties</td>
</tr>
<tr>
<td>Week 9/22</td>
<td>Exp #4,5 Pre-Lab pg 35-41, 47-53</td>
<td>Exp #4 – Energy &amp; Specific Heat parts A and B Exp #5 - Energy &amp; Matter parts A and B</td>
</tr>
<tr>
<td>Week 9/29</td>
<td>Exp #9 Pre-lab pg 95-103</td>
<td>Exp #9 – Compounds &amp; Their Bonds</td>
</tr>
<tr>
<td>Week 10/6</td>
<td>Prepare for Quiz 3 Exp #10 Pre-Lab pg 109-115</td>
<td>Quiz 3 – Exps 4/5, 6 &amp; 7 Exp #10 - Chemical Reactions &amp; Equations</td>
</tr>
<tr>
<td>Week 10/13</td>
<td>Exp #11 Pre-Lab pg 121-127</td>
<td>Exp #11 – Moles &amp; Chemical Formulas</td>
</tr>
<tr>
<td>Week 10/20</td>
<td>Week of Fall Break</td>
<td>No Lab</td>
</tr>
<tr>
<td>Week 10/27</td>
<td>Prelab worksheet for water purification from OAKS</td>
<td>Water purification lab from OAKS</td>
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<tr>
<td>Week 11/3</td>
<td>Prelab worksheet for water purification from OAKS</td>
<td>Biological Oxygen Demand (BOD) lab from OAKS</td>
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<tr>
<td>Week 11/10</td>
<td>Prelab worksheet for water purification from OAKS</td>
<td>Chromatography and spectroscopy lab from OAKS</td>
</tr>
<tr>
<td>Week 11/17</td>
<td>Prepare for Quiz 4 Prelab worksheet for conductivity/salinity from OAKS</td>
<td>Quiz 4 – Exp 9,10, water purification and BOD Conductivity and Salinity lab from OAKS</td>
</tr>
<tr>
<td>Week 12/1</td>
<td><strong>Final Exam- Rm 125 NSCB</strong></td>
<td>Turn in lab report for Charleston Water Quality labs week of 11/23</td>
</tr>
</tbody>
</table>

* In addition to each Pre-Lab assignment listed in the schedule, starting the 2nd week of lab the Student will add the following exercise to each Pre-Lab assignment:
  1) Identify 3 physical or chemical hazards which the Student may encounter in the experiment of the day;
  2) Briefly explain how the Student can minimize the risk from each of the identified hazards.