Chemistry 1021 Laboratory Syllabus, Fall 2019

To all labs, you must bring: the lab manual, a Carbon Copy Lab Notebook, Safety Goggles and Lab Coat, and your laptop

For lab information visit the Chemistry website: [www.clemson.edu/chemistry/genchem](http://www.clemson.edu/chemistry/genchem) or your lab section CANVAS website.

SuperChem Lab link: Go to Chemistry website (see above) and click on Lab tab, then CH1011. You will find information about equipment, techniques and safety at the SuperChemLab website.

General Chemistry Lab Coordinator: Vivian C. Ezeh. Office: Hunter 269. Email: [VEZEH@clemson.edu](mailto:VEZEH@clemson.edu). Appointment for office hours: visit [bit.ly/OHwDrEzeh](http://bit.ly/OHwDrEzeh) to make a 15-min appointment. Alternatively, you can make an appointment via email.

Procedural Outline
The format, reasoning, and structure of the laboratory are described in the lab manual in the “To the Student” section (Pages 6 through 11). Review these pages to familiarize yourself with the objectives and expectations of the lab.

The tentative schedule for the semester is as follows:

<table>
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<tr>
<th>Week</th>
<th>Project &amp; In-Lab Assignments</th>
<th>Assignment</th>
</tr>
</thead>
</table>
| 09/02-09/06   | Check In, Team-building & Capstone installation  
Practice use of capstone  
Plan Project 17 – Soap                                      | Complete Safety Quiz in CANVAS w/90 or better before next lab session. Take lab check-in quiz in lab.  
Bring laptops to all lab sessions |
| 09/09-09/13   | Start Project 17                                                                             |                                                                            |
| 09/16-09/20   | Continue Project 17  
Work on Prelim Group Report for Project 17  
Complete Project 17                                           | Preliminary report on Project 17 (Group & Individual) due next lab session |
| 09/23-09/27   | Prelim report on Project 17 due (Group & Individual)  
Complete Project 17                                           | Poster Presentation on Project 17 due next lab session.                              |
| 09/30-10/04   | Presentation on Project 17 due  
Plan and Start Project 15 – Chemical Kinetics  
Complete Project 15                                           | Project 17 Final Report (Group & Individual) due next lab  
Submit all P17 notebook pages |
| 10/07-10/11   | Final report on Project 17 due (Group & Individual)  
Complete Project 15                                           | Peer evaluation of P17.  
Presentation on Project 15 due next lab session. |
| 10/14-10/18   | Fall Break, No GenChem Labs                                                                 |                                                                            |
| 10/21-10/25   | Presentation on Project 15 due  
Plan & Start Project 7 – Acids and Bases                                      | Submit all P15 notebook pages. Peer evaluation of P15. |
| 10/28-11/01   | Continue Project 7                                                                            | Bring acidic or basic household chemical to next lab session  
- one chemical per student. |
| 11/04-11/08   | Complete Project 7  
Work on Group Lab Report for Project 7                                               | Project 7 Final Report (Group & Individual) due next lab session. |
| 11/11-11/15   | Final report on Project 7 due (Group & Individual)  
Plan and Begin Project 10 – Electrochemistry                                     | Submit all P7 notebook pages. Peer evaluation of P7 |
| 11/18-11/22   | Complete Project 10                                                                          | Submit all P10 notebook pages. Project 10 Presentation due next lab session. |
| 11/25-11/29   | Thanksgiving Break, No GenChem Labs                                                          |                                                                            |
| 12/02-12/06   | Project 10 Presentation/Check Out/Course Evaluations                                        |                                                                            |

**Attendance to labs is required.** If you are absent from lab, contact your team members and TA to discuss how to contribute to group work. Your absence can be excused if written documentation is provided to Dr. Ezeh. If no documentation is provided, your final grade will be reduced by 25 points for each missed lab. All students will receive one absence without documentation. **If your TA is more than 30 minutes late, you may assume labs has been cancelled for that day.**
SAFETY NOTE: SAFETY GOGGLES, LAB COAT, PROPER LAB CLOTHES (no exposed skin below the waist), AND CLOSE TOED SHOES MUST BE WORN TO LAB. Students must have proper clothing on before entering the lab. ANY STUDENT WHO DOES NOT COMPLY WITH THIS REGULATION OR ANY OF THE OTHER LABORATORY SAFETY RULES WILL HAVE SAFETY POINTS DEDUCTED FROM THEIR GRADE.

University Policies:
1. Academic Integrity – “As members of the Clemson University community, we have inherited Thomas Green Clemson’s vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.”

2. Violations of the academic integrity policy – “When, in the opinion of a faculty member, there is evidence that a student has committed an act of academic dishonesty, the faculty member shall make a formal written charge of academic dishonesty, including a description of the misconduct, to Dr. Jeff Appling, Associate Dean of Undergraduate Studies. At the same time, the faculty member may, but is not required to, inform each involved student privately of the nature of the alleged charge. In cases of plagiarism (I.B.2.) instructors may use the Plagiarism Resolution Form available from the Office of Undergraduate Studies.”

3. Accommodations – “Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the professor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing studentaccess@lists.clemson.edu, or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if at all possible, but there could be a significant wait due to scheduled appointments. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student’s responsibility to follow this process each semester. You can access further information here: http://www.clemson.edu/campus-life/campus-services/sds/.”

4. Title IX (Sexual Harassment) statement: “The Clemson University Title IX (Sexual Harassment) statement must be included: Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran’s status, genetic information or protected activity in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at http://www.clemson.edu/campus-life/campus-services/access/title-ix/. Mr. Jerry Knighton is the Clemson University Title IX Coordinator. He also is the Director of Access and Equity. His office is located at 110 Holtzendorff Hall, 864.656.3184 (voice) or 864.656.0899 (TDD).”

Grading for Projects

<table>
<thead>
<tr>
<th>Prelab/Summary questions/TA interaction</th>
<th>Project 17 (Soaps &amp; Detergents)</th>
<th>Project 15 (Chemical Kinetics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary report</td>
<td>10 points (individual grade)</td>
<td>10 points (group grade)</td>
</tr>
<tr>
<td>Final report</td>
<td>100 points (individual &amp; group grade)</td>
<td>10 points (group grade)</td>
</tr>
<tr>
<td>Lab notebook</td>
<td>20 points (individual grade)</td>
<td>10 points (individual grade)</td>
</tr>
<tr>
<td>Oral Report or Poster Presentation</td>
<td>25 points (group grade)</td>
<td>N/A</td>
</tr>
<tr>
<td>Peer evaluation</td>
<td>20 points (individual grade)</td>
<td>20 points (individual grade)</td>
</tr>
<tr>
<td>Safety, Technique &amp; Participation</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Total</td>
<td>205 points</td>
<td>100 points</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Prelab/Summary questions/TA interaction</th>
<th>Project 7 (Acids &amp; Bases)</th>
<th>Project 10 (Electrochemistry)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab notebook</td>
<td>10 points (individual grade)</td>
<td>10 points (group grade)</td>
</tr>
<tr>
<td>Presentation of results</td>
<td>30 points (group grade)</td>
<td>10 points (group grade)</td>
</tr>
<tr>
<td>Peer evaluation</td>
<td>20 points (individual grade)</td>
<td>N/A</td>
</tr>
<tr>
<td>Safety, Technique &amp; Participation</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Total</td>
<td>80 points</td>
<td>30 points</td>
</tr>
</tbody>
</table>

Final Lab Grades are determined by dividing points earned (as shown above) by total possible points (485) and converting to a percentage. Assignments may be graded using a different point scale but will then be converted to the scale shown above. TAs are expected to return graded assignments as soon as possible. Grades will be released on canvas when all sections’ grades have been received.

Safety Quiz – To pass the course, students must successfully pass the safety quiz (with a score of 90 or greater). This quiz is available on canvas and the score on the safety quiz does NOT count toward your final lab grade.

Lab Check-in – This quiz will be completed during the first day of lab. The quiz tests that you have read the syllabus, have explored the canvas site and you document the list of lab equipment provided to you. The score doesn’t count toward your lab grade.

** Safety, Technique & Participation – Students are assessed on how well they comply with all safety rules, handle lab equipment, maintain lab drawers, and participate in experimental procedures of each project. Students can lose up to 15 points from the total possible points of EACH project.
Please bear in mind the University policies on academic dishonesty (see above). The individual portion of the lab reports you write, even though they will be based on the experimental work of the group, must be your own work. You will receive a 0 on the assignment if you copy work from a group presentation in any part and claim it as your own. The individual portion of your lab reports needs to show your individual understanding of the project. You will be required to sign (full name can be used as signature) the following statement on each individual part of your lab report indicating that your report is your own work: “My signature indicates that this document represents my own work. Outside of shared data, the information, thoughts and ideas are my own except as indicated in the references. I have submitted an electronic copy through CANVAS to be scanned by TurnItIn.com. In addition, I have not given aid to another student on this assignment.” Any violations of the academic integrity policy will be prosecuted according to Clemson’s guidelines as noted above and as outlined on the Clemson website. (Search for “Academic Integrity Policy” in the site index.) An electronic as well as a printed copy of the final lab reports will be required. The electronic copy must be submitted by the deadline indicated in the schedule or the student will receive a 0 on that lab report. All work must be original for the present semester and course.

Your TA will explain other grading items. Late reports will be penalized at 5 points per day. All grade protests must be done in writing and submitted within 1 week of the date graded work was returned or posted on CANVAS (whichever occurs first).

CANVAS Information/Settings
1. Set your notifications in CANVAS to receive posted announcements, emails (known as Conversations), and Course Activities. Lack of notification due to your settings is not an excuse for being uniformed. You can find these settings by logging into CANVAS. Click on your picture in the left menu and then choose the NOTIFICATIONS option.
2. DO NOT POST COMMENTS IN CANVAS. Your TA does not receive notification of those comments. To communicate with your TA or the lab coordinator (Dr. Ezeh) use email through your email account. Your TA will give you their email address the first day of lab. You can also find email addresses for TAs in the Clemson phonebook (an option on the Clemson homepage) and in CANVAS INBOX where they are listed as one of the TAs for your lab course.

GENERAL EDUCATION COMPETENCIES
As stated in the Undergraduate Announcements, Clemson’s mission statement requires students show competency in nine general education areas. In CH1021, the final lab report for Project 17 or 7 will address the Natural Science competency. (Competency C found on page III-1 in the 2017-2018 Undergraduate Announcements.) This competency states:

*Demonstrate the process of scientific reasoning by performing an experiment and thoroughly discussing the results with reference to the scientific literature, or by studying a question through critical analysis of the evidence in the scientific literature.*

One of your lab reports (group and individual) may be submitted to a university repository to be reviewed for compliance with General Education competencies. This is a separate review from the turnitin analysis and the TA’s grading of your report. The review of your lab report from the university repository will not affect your grade. It is the TA’s assessment of the submitted hard copy that determines your grade on this report.

Directions for completing this written assignment, as well as a grading rubric, will be found in CANVAS under the Resources button. By following these directions, the Project 17 and 7 final lab report will show mastery of this competency.