Chemistry 1061 Laboratory Syllabus - Spring 2017

Required Materials
Laboratory Manual – Information/handouts will be found at https://chemistry.sites.clemson.edu/genchem. Follow the lab links for CH1061. The information is also available under COURSE INFORMATION in your Blackboard lab course.

Carbon Copy Lab Notebook
Safety Goggles and Lab Coat
Bring laptop and textbook (for reference) to lab
SuperChem Lab link: Go to Chemistry website (see above) and click on Lab tab, then CH1061. SuperChem Lab is an option.

General Chemistry Lab Coordinator: Barbara Lewis, Office-Hunter 269, Email - BARBARL@clemson.edu, Office hours are from 10am to 3pm MTWTh by appointment ONLY.

TENTATIVE LABORATORY SCHEDULE
1/23-1/26 Check desk equipment, Discuss safety, techniques, and rules for laboratory work. Assign Groups. **Nuclear Chemistry.** Assignment-complete Safety Quiz in Blackboard before next lab.
1/30-2/02 Have Safety Quiz completed. **Electrochemistry**
2/06-2/09 Begin **Analysis of Household Chemicals**
2/13-2/16 Complete **Analysis of Household Chemicals**/. All sections bring plastic sample to next lab.
2/20-2/23 **Classification and Identification of Common Plastics/ Prelim Research Project due next lab.**
2/27-3/02 **Chemiluminescence/ Preliminary Research Project due.**
2/06-3/09 Begin **Aspirin**
3/13-3/16 Complete **Aspirin. Esters**
3/20-3/23 **Spring Break** – No GenChem labs
3/27-3/30 **Properties of Analgesic Drugs/Bring food sample to next lab.**
4/03-4/06 **Nutrition: Fat Content of Foods / Final Research Project due next lab**
4/10-4/13 **Caffeine Crystals From Beverages / Final Research Paper due.**
4/17-4/20 **Crime Lab Chromatography**
4/25-4/27 **Oral reports on Crime Lab Chromatography/ Check out of lab**

Attendance in this lab is required. Credit is not received for missed work. Labs can only be made up if they are **prearranged** AND due to a conflicting university required event. You will not receive credit for missed work regardless of the reason for the absence. Your final average will be reduced 5 points for each missed lab. You may be excused for the first absence (sickness or death in immediate family) if written documentation is provided.

If your TA is more than 30 minutes late, you may assume lab 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 BE TOLD TO LEAVE THE LAB, RESULTING IN AN UNEXCUSED ABSENCE. Read the Safety Rules online/in Blackboard as directed by your TA during your first lab meeting.

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).

**Weekly assignments**

*Due at the end of each lab: Carbon copies of notebook pages containing detailed procedures, observations, and data for the day’s work.*

*Summaries:* Typed summary for each experiment due the beginning of the lab following the lab in which the experiment was completed. Summaries should address the goals/objectives of the experiment and should answer the discussion questions for that experiment. Summaries should also summarize the procedure and results, include conclusions about the experiment, and should provide data to support answers and conclusions.

*Research Project:* Each student will individually complete a research project. A list of suggestions will be provided after the first lab. The student may choose a topic not on the list of suggestions. The student must get the TA’s approval by the third week of lab for their chosen topic. The topic needs to provide the student an opportunity to research in depth one of the topics covered in the CH1060 Chemistry course. Details on the requirements for the Preliminary Research Project and the Final Research Project assignments will be provided to the student. It will also be available on the chemed website and through the student’s Blackboard course. On the title page of each paper, the student will be required to sign a statement (supplied by the TA) that indicates the submitted paper is their own work AND that they did not give aid to another student. An electronic as well as hard copy of the final paper will be required. The electronic copy must be submitted through Blackboard to TurnItIn.com. It will then be scanned for violation of Clemson’s academic dishonesty policy. 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.) Your TA will provide directions on how to submit the Blackboard electronic copy. Both the hard copy and electronic copy must be submitted by the emailed deadline or the student will receive a 0 on their final project. The material for the research project must be original for this semester and course.

**All grade protests must be done in writing and submitted within 1 week of date graded work was returned or posted on Blackboard (whichever occurs first).**

*Notebooks* will receive weekly grades of 0 – 5 points for a total of up to 60 points.

*Summaries* for each experiment will receive grades of 0-10 points for a total of up to 100 points.

*Final Research Projects* will receive grades of 0-100. The Preliminary Research Project will be turned in at mid-term for grading (up to 10 points) and feedback. Late work can be penalized up to 5 points per day.

*Oral Reports* will receive grades out of a possible 20 points.

**Safety Quiz** – To pass the course, each student must successfully pass the safety quiz. Your TA will provide the details and deadline. The score on the safety quiz does NOT count towards the student’s final 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. For violations students can lose up to 30 points from their total earned points for the semester.

*Your Final Average will be determined by dividing total points earned by total possible points (290).*

**GENERAL EDUCATION COMPETENCIES**

As stated in the Undergraduate Announcements, Clemson’s mission statement requires students show competency in nine general education areas. In CH1061, the final research project will address the Natural Science competency. (Competency C found on pages 36-37 in the 2016-2017 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.*

Your final research project may be submitted to a university repository. The logistical details for this submission will be shared with you at a later date. Your TA will provide detailed instructions on how to make this submission. This is a separate review from the turnitin analysis and the TA’s grading of your research project. Although the review of your research project from the university repository will not affect your grade, failure to make any required submission will result in the student not earning possible bonus points. It will be the TA’s assessment of the submitted hard copy that determines your grade on this research project.

Directions for completing the research project can be found in your Blackboard lab course under Course Information in the Lab Policies and Information folder. In that folder there are two documents relating to the research project. By following these directions, following the directions given by your TA, and noting the feedback given on your preliminary research project, your final research project will show mastery of this competency.