

Course Title/Number	Principles of Chemistry Laboratory I / CHM 217 Sections 103 & 104
Semester/Year	Fall 2018
Days/Time	8:00-10:50 AM Tuesdays
Location	473 Science Hall (pre-lab lecture), 474/476 (laboratory)
Instructor	Dr. Laura McCunn-Jordan ***PLEASE CALL ME DR. MCCUNN
Office	466 Science Hall; research lab: 404 Science Hall
Phone	(304) 696-2319
E-Mail	mccunn@marshall.edu
Office Hours	Mon. 10:00-11:00 and 3:00-4:00; Wed./Fri. 10:00-11:50. I welcome drop-in visits, but I am not always available outside of office hours. Simple questions can be answered via email. Email is typically answered within 1 business day.
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802 Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment

Course Description:

A laboratory course that demonstrates the application of concepts introduced in CHM 211. 2.00 credits. Corequisite or prerequisite: CHM 211

Required Texts, Additional Reading, and Other Materials

1. CHM 217 Lab Manual
2. access to MU Online and a Marshall email account
3. composition notebook with sewn binding (*not spiral-bound*) and blue/black ink pen
4. indirectly vented chemical safety goggles
5. combination lock for lab drawer
6. roll of paper towels for cleanup
7. non-programmable calculator for tests and exams (it must not have keys for the alphabet)
8. access to ACS academic lab safety guide (online)
<https://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/safe-ty-in-academic-chemistry-laboratories-students.pdf>

Student Learning Outcomes	How students will practice each outcome in this course	How each outcome will be assessed
Students will know and follow safety rules in the chemical laboratory.	<ul style="list-style-type: none"> • safety training at MU Online • reading laboratory manual 	<ul style="list-style-type: none"> • online safety quiz • midterm and final exams • instructor's evaluation
Students will learn how to properly use and care for laboratory equipment.	<ul style="list-style-type: none"> • reading laboratory manual • prelab lecture • laboratory experiments 	<ul style="list-style-type: none"> • lab reports • instructor's evaluation
Students will learn how to record and communicate laboratory experiments and results.	<ul style="list-style-type: none"> • reading laboratory manual • prelab lecture • laboratory experiments 	<ul style="list-style-type: none"> • lab notebook • lab reports
Students will apply concepts introduced in chemistry lecture (CHM 211).	<ul style="list-style-type: none"> • reading laboratory manual • laboratory experiments • laboratory calculations 	<ul style="list-style-type: none"> • lab quizzes • lab reports • midterm and final exams

Grading Policy

lab notebook	125	points
prelab quizzes*	55	points
lab reports (including postlab questions)*	540	points
checkout (end of semester)	5	points
midterm exam	100	points
final exam	150	points
instructor's evaluation of student performance**	25	points
	1000	TOTAL POINTS

*Each student's lowest lab report grade and lowest quiz grade of the semester will be dropped, as also described in the Attendance Policy. Hard copies of lab reports and postlab questions must be submitted before the end of prelab lecture. Each student will be permitted one late (unexcused) report, which must be submitted by email or hardcopy by 6:00 PM on the due date.

** The instructor's evaluation of student performance will be based on observation of safety rules and proper maintenance of laboratory facilities. Students may lose these points for offenses such as, but not limited to: tardiness, improper waste disposal, safety violations, leaving a mess on the balances, failure to return/store lab equipment before leaving lab.

Grading Scale A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: 0-59%

The percentage of total points earned will be rounded to the nearest whole percentage. If you believe there has been an error in the grading of your work, please consult Dr. McCunn.

Attendance Policy

Attendance is required to complete and receive credit for experiments. The Department of Chemistry policy requires that students complete at least 75% of laboratories to receive credit. Students will receive a grade of "F" for missing 4 or more laboratories, whether the absences are excused or unexcused. If you have an excused absence, you must contact the instructor as soon as you are permitted to return to campus in order to schedule makeup work. Do not wait until the following week's lab to make arrangements. If you anticipate missing a lab, notify the instructor as soon as possible. It may be possible to make *prior arrangements* to complete the lab in the same week with a different section and instructor. *Permission from Dr. McCunn and the alternate instructor is required.* If class is cancelled unexpectedly, scheduled assignments will be due and scheduled tests will be given during the next class meeting.

Each student's lowest quiz grade and lowest report grade will be dropped from their overall grade. Because of this policy, students with unexcused absences will not be allowed to make up the missed work. More than one unexcused absence will adversely affect a student's grade. Students who are absent (unexcused) from lab and wish to turn in their report from the previous week may email it to Dr. McCunn by 6:00 PM on the day of lab, but it will count as the one allowed late report (see Grading Policy).

Lab Safety

The safety rules for the laboratory are outlined in your lab manual. Safety training must be completed at MU Online prior to the given deadline admission to the lab will be denied. Proper clothing is of the utmost importance. This means that legs should be covered down past the knees (pants are best) and the entire torso should be covered. Shoes must completely cover feet, including the tops of the feet. (No ballet flats or sandals.) If your attire is unsafe, you must change before entering the lab and points will be deducted from your grade. Any reckless disregard for safety (horseplay, frequent/willful lapses in wearing of goggles, etc.) may result in dismissal from the lab and failure of the course. Cell phones and similar electronic devices should not be used while in the lab except as calculators and timing devices. Misuse of electronics may result in dismissal from lab for the day and a failing grade for the experiment. Students who are tardy and miss safety briefings in prelab lecture may be denied entry to lab that day.

Miscellaneous Policies

Use of cell phones / PDAs / MP3 players and similar devices during quizzes and exams will be considered as cheating. The only materials permitted during a test are a non-programmable calculator, pen/pencil, and those provided by the instructor. Class announcements may occasionally be made via email to your university email address. Please check it on a regular basis. Supplemental course materials will be posted at MU Online.

Course Schedule

Date	Experiment #	Topic
8/21	1 Part 1	Lab Check-in & Methods of Measurement
8/28	1 Part 2	Methods of Measurement
9/4	2	Separating Components of a Mixture
9/11	3	Determination of the Percent Oxygen in Air
9/18	4	Determination of an Empirical Formula
9/25	5	Determination of Avogadro's Number
10/2	6 / Midterm Exam	Synthesis of an Alum
10/9	7	Reactions
10/16	9	Heat of Reaction and Heat of Solution
10/23	10	Titration of Vinegar
10/26	last day to withdraw from full-semester courses	
10/30	11	Combustion – Synthesis and Reactions of Oxygen
11/6	12	Energy of a Peanut: Calorimetry
11/13	13	Molecular Architecture
11/20	no lab, Thanksgiving Break	
11/27	8	Determination of Molar Mass
12/4	Final Exam	