Course Title/Number	Principles of Chemistry Laboratory II, CHM 218, SEC 204
Semester/Year	Spring 2018
Days/Time	Tuesday 2:00–4:50 PM
Location	S473 (lecture); S476 (laboratory)
Instructor	Derrick R. J. Kolling
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Office Hours	Monday 2–4 P.M. (WAEC2217), Tuesday 12–2 P.M (S460). If you cannot attend the scheduled times, email or call me to set up an appointment. Expect to wait at least 24 hours before responses to emails.
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 www.marshall.edu/academic-affairs/policies/. 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: From Catalog

A laboratory course that demonstrates the application of concepts introduced in CHM 212. 2.00 credits. Corequisite or prerequisite: CHM 212.

The table below shows the following relationships: How each student learning outcome will be practiced and assessed in the course.

Course student learning outcomes	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Student will learn and follow safety rules in the lab.	-safety training at MUOnline -reading lab manual	-online safety course -midterm and final exams -evaluation by instructor
Students will learn to properly use and care for lab equipment.	-reading lab manual -prelab lecture -lab experiments	-lab reports -online quizzes
Students will learn how to record and communicate procedures and findings.	-reading lab manual -prelab lecture -lab experiments	-lab notebooks -lab reports
Students will apply concepts introduced in CHM212.	-quizzes -homework	-pre- and post-lab questions -midterm and final exams

Required Texts, Additional Reading, and Other Materials

1. CHM 218 Lab Manual
2. SEWN-BOUND lab notebook (no spiral- or glue-bound)
3. goggles (indirectly vented; no safety glasses)
4. NON-PROGRAMMABLE calculator (no alphabetic keys)
5. black or blue ink pen
6. COMBINATION lock (no key locks)
7. paper towels
8. ACS academic lab safety guide

https://www.acs.org/content/acs/en/about/governance/committees/chemicalsafety/chemical-safety-in-the-classroom.html

At the bottom of the page, click on: Safety in Academic Chemistry Laboratories: Volume 1 (student edition, college)

Grading Policy

Students should prepare for each class by reading the material that is to be covered, completing the pre-lab questions, and taking the online quiz. Grades will be determined by:

Online quizzes*	50	points
Lab notebook (and attendance)	100	points
Lab reports (including pre- and post-lab questions)[%]	550	points
Midterm	125	points
Final exam	175	points
	1000	TOTAL POINTS[#]

*Quizzes must be completed the night before class.

[%]The lowest lab report grade of the semester will be dropped.

[#] Students may lose points for safety violations, making messes in the lab, tardiness, etc.

Grading Scale:

900-1000 points	A
800-899 points	B
700-799 points	C
600-699 points	D
0-599 points	F

Attendance Policy

Attendance is mandatory for the labs and exams. Make-up exams and/or labs will be granted only in cases that are recognized by the University through an excused absence. Students should contact the instructor as soon as they are able to return to classes. If students know that they will miss the class in advance (and qualify for a University approved excuse), they should contact the instructor at the earliest possible date to arrange for an alternate lab time. If class is cancelled unexpectedly, scheduled assignments will be due and scheduled tests will be given during the next class meeting. The Department of Chemistry policy requires that all students complete at least 75% of laboratories. Students will receive a grade of "F" for missing 4 or more laboratories, whether they are excused or unexcused absences.

Lab Safety

The safety rules for the labs can be found in p. viii of your CHM 218 lab manual. Shoes that completely cover the feet are absolutely required for participation in the laboratory. Legs must be covered down past the knees. No midriff-baring tops are allowed. The instructor will send home students who have not dressed appropriately for lab. The instructor will clean up all broken glassware. Cell phone, laptop, and MP3 player usage is discouraged during class. Students must maintain a clean work space and observe safety rules. The professor reserves the right to deduct points from students' grades for poor conduct. All injuries, no matter how trivial, must be reported to the instructor immediately.

Course Schedule

Date	Experiment #	Topic	Reports Due
1/9	1	Introduction to Graphing; Check-in	1/15
1/16	2	Absorption Spectroscopy	1/22
1/23	3	Beer's Law: Determining Mass % of Acetylsalicylic Acid in Aspirin	1/29
1/30	8	Kinetics of Decomposition of Hydrogen Peroxide	2/5
2/6	4	Protein Extraction & Folding: Investigating Intermolecular Forces	2/12
2/13	10	Studying LeChâtelier's Principle	2/26
2/20	**Midterm Exam**		
2/27	7	Bonding and Acidity	3/5
3/6	6	Quantitative Analysis: How Accurate Can a Titration Get?	3/12
3/13	9	pH Dependence of Drug Absorption	3/26
	10/28 is the last day to withdraw from full-semester courses		
3/20	Spring Break		
3/27	11, 12	Qualitative Analysis: What Metal Ions Are in This Solution? And Isolation of Copper Metal from Malachite Beads	4/9
4/3	11, 12		4/9
4/10	13	Gibbs Free Energy: Solubility and Spontaneity	4/16
4/17	14	Synthesis of a Coordination Compound; Check-out	4/23
4/24	**Final Exam**		