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| Course Title/Number | Principles of Chemistry Laboratory I, CHM 217 |
| Semester/Year | Fall 2018 |
| Days/Time | Monday 2:00–4:50 PM |
| Location | S465 (lecture); S476 (laboratory) |
| Instructor | Amanda L. Smythers |
| Office | 2239 AWFAEC; Research Lab: 2208 AWFAEC |
| E-Mail | White461@marshall.edu |
| Office Hours | Wednesday 2–4 PM. If you cannot attend the scheduled time, email 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

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| A laboratory course that demonstrates the application of concepts introduced in CHM 211. 2.00 credits. Corequisite or prerequisite: CHM 211. |
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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 |
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| 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 CHM211. | -quizzes -homework | -pre- and post-lab questions -midterm and final exams |

Required Texts, Additional Reading, and Other Materials

1. CHM 217 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 – no pencils
6. COMBINATION lock (no key locks)
7. paper towels
8. ACS academic lab safety guide

<http://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/safety-in-academic-chemistry-laboratories-students.pdf>

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:

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| Quizzes* | 5 % |
| Lab notebook [#] | 10 % |
| Lab reports (including pre- and post-lab questions) [%] | 55 % |
| Midterm | 15 % |
| Final exam | 15 % |

*Quizzes must be completed within the first 10 min of class.

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

[#] Students will lose points from their lab notebook score for safety violations, making messes in the lab, tardiness, etc.

Grading Scale:

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| 90 - 100 | A |
| 80 – 89.9 | B |
| 70 - 79.9 | C |
| 60 – 69.9 | D |
| 0 – 59.9 | 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 217 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 not acceptable during class. Students must maintain a clean work space and observe safety rules. The instructor will deduct points from students' grades for poor conduct. All injuries, no matter how trivial, must be reported to the instructor immediately.

All students must take and receive an 85% or higher on the MUOnline safety exam. Beginning week 2, any student who has not completed the safety exam will not be allowed in the lab and will receive a 0 for that day.

Extra Credit

Every student who receives a 100% on the MUOnline Safety Exam before 8/27 will receive 5 points extra credit. There will be 2 points of extra credit on each exam. No other curves or extra credit will be offered.

Course Schedule

| Date | Experiment # | Topic | Reports Due |
|-------|--|--|-------------|
| 8/20 | 1 part I, H1 and H2 | Lab check-in, Density of Water, Sig Figs, and Dimensional Analysis | |
| 8/27 | 1 part II | Density of Solutions | 9/10 |
| 9/3 | No class – Labor Day | | |
| 9/10 | 2 | Separating Mixture Components | 9/17 |
| 9/17 | 3 | Determination of % Oxygen in Air | 9/24 |
| 9/24 | 4 | Determination of an Empirical Formula | 10/1 |
| 10/1 | 5 | Determination of Avogadro's Number | 10/8 |
| 10/8 | 6 / Midterm Exam | Synthesis of an Alum | 10/22 |
| 10/15 | 7 | Reactions | 10/22 |
| 10/22 | 9 | Heat of Reaction and Heat of Solution | 10/29 |
| | 10/26 is the last day to withdraw from full-semester courses | | |
| 10/29 | 10 | Titration of Vinegar | 11/5 |
| 11/5 | 11 | Combustion! | 11/12 |
| 11/12 | 12 | Energy of a Peanut: Calorimetry | 11/26 |
| 11/19 | No class- Thanksgiving Break | | |
| 11/26 | 13 | Molecular Architecture | 12/3 |
| 12/3 | 8 | Determination of Molar Mass – Lab Checkout | 12/10 |
| 12/10 | Final exam: 2 – 3 pm | | |

Note

This syllabus is a living document. While every attempt will be made to stick to its contents, alterations may take place. Students will be notified in class and via email if changes should occur.