I. INTRODUCTION
Chemistry 111 is the first course in chemistry for all students majoring in chemistry or one of the other sciences: biology, earth sciences and physics. All students registered for this course should have taken the Math and Chemistry Placement Exams. If you haven’t, please take them as soon as possible. If the scores you receive on these exams necessitate a change in your schedule, you will be able to drop and add classes through the Registrar’s Office without any problems.
Get into good study habits early by keeping up with the reading assignment and homework. It is best to allocate a certain number of problems each day so as to keep up with the homework. The practice gained by doing the problems will be most beneficial for the exams and quizzes. KEEP UP WITH THE MATERIAL IN THE COURSE ON A DAY-BY-DAY BASIS, RATHER THAN PUT IT OFF UNTIL JUST BEFORE THE EXAM.

II. COURSE MATERIALS REQUIRED
1. Chemistry by Flowers, Theopold, Langley and Robinson; OpenStax, 2019,
   The book is available in web view and PDF for free. You may purchase a hard copy on Amazon for US$ 50.
   https://openstax.org/details/books/chemistry-2e
2. A calculator that has log, ln, 10^x, and e^x functions. Cell phone calculators are strictly forbidden when taking quizzes and exams.
3. Lab Experiments will be sent as pdf files
4. Lab Notebook: Must be bound (no ring binders) approximate size 7 x 9.5”, quadrille ruled.
   Carefully follow the instructions for the laboratory notebook on pages 8 through 10 of the laboratory manual.
5. Lab safety goggles.

III. A. CLASS SCHEDULE

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>Chemical Foundations</td>
</tr>
<tr>
<td>2</td>
<td>Atoms, Molecules, and Ions</td>
</tr>
<tr>
<td>3</td>
<td>Composition of Substances and Solutions</td>
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<td></td>
<td>Exam - I</td>
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<tr>
<td>4</td>
<td>Stoichiometry of Chemical Reactions</td>
</tr>
<tr>
<td>5</td>
<td>Thermochemistry</td>
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<td></td>
<td>EXAM - II</td>
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Electronic Structure and Periodic Properties
Chemical Bonding
Theories of Chemical Bonding

EXAM - III

Gases
Liquids and Solids
Properties of Solutions

Exam - IV

Dec. 7 (WED): FINAL EXAM 8 - 10 a.m. (Comprehensive)

PROBLEMS WILL BE ASSIGNED IN EACH CLASS

B. TENTATIVE LAB SCHEDULE

- 8/25 – Lab safety, check-in, Density (Experiment 1)
- 9/1 - Formula of a Hydrate (Experiment 2, PART A)
- 9/8 - Formula of a Hydrate (Experiment 2, PART B)
- 9/15 - Identification of Common Chemicals (Experiment 6)
- 9/22 - Identification of Common Chemicals (Experiment 6)
- 9/29 - Titrations of Acids and Bases (Experiment 7, PART B)
- 10/6 - Gravimetric and Volumetric Analysis (Experiment 8, PART A)
- 10/13 - Gravimetric and Volumetric Analysis (Experiment 8, PART B)
- 10/20 – Thermochemistry (Experiment 11)
- 10/27 – Analysis of Aspirin (Experiment 12)
- 11/3 – Analysis of Aspirin (Experiment 12)
- 11/10 – Molecular Models (Experiment 13)
- 11/17 - Gas law (Experiment 10)
- 12/1 – Lab practicum and check-out.

C. RECITATION

1. Discussion about matters from lectures. (Ask questions!)
2. Review of problems assigned in lecture.
IV. COURSE GRADING AND POLICIES

A. GRADING

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Four Unit Exams</td>
<td>400</td>
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<tr>
<td>Final Exam</td>
<td>200</td>
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<tr>
<td>Quizzes</td>
<td>200</td>
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<tr>
<td>Lab</td>
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<td><strong>TOTAL POINTS</strong></td>
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Guaranteed Letter Grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Percentage</th>
<th>Minimum Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90 - 100%</td>
<td>87% - 90%</td>
</tr>
<tr>
<td>A-</td>
<td>87% - 90%</td>
<td>B+ 84% - 87%</td>
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<tr>
<td>B</td>
<td>80 - 84%</td>
<td>77% - 80%</td>
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<tr>
<td>B-</td>
<td>77% - 80%</td>
<td>C+ 74% - 77%</td>
</tr>
<tr>
<td>C</td>
<td>70 - 74%</td>
<td>67% - 70%</td>
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<tr>
<td>C-</td>
<td>67% - 70%</td>
<td>D+ 64% - 67%</td>
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<tr>
<td>D</td>
<td>60 - 64%</td>
<td>57% - 60%</td>
</tr>
<tr>
<td>D-</td>
<td>57% - 60%</td>
<td>F Less than 57%</td>
</tr>
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</table>

YOU MUST ACHIEVE A PASSING GRADE IN THE LECTURE COMPONENT TO PASS THE COURSE, i.e., EARN 480 POINTS OUT OF A TOTAL POSSIBLE POINTS OF 800 ASSOCIATED WITH LECTURE.

B. COURSE POLICIES

1. There will be a quiz given every Wednesday during class time.
2. Lab reports/quizzes should be neat and written legibly in ink. They are due at the end of each lab period. Credit will be deducted for “late” reports. Instructions for writing lab reports are in the introduction section of the laboratory manual. All lab reports should be submitted (even if they are late) in order to pass the course.
3. All students will take the examinations and quizzes as scheduled. You are responsible for obtaining the notes for any class you miss, whether your absence is excused or not. Other than health problems (that require a written, signed excuse from the doctor stating that you were too ill), excused absences will only be considered before the scheduled exam. A make-up exam will be scheduled at a mutually agreeable time within three days in these circumstances. There are no makeups for missed quizzes. For excused absences the final exam percentile will be used to calculate the grade.
4. Plagiarism and copying are expressly prohibited. If you secure information from another person and do not acknowledge it in writing in your laboratory report, you will receive a grade of zero for that work.
5. Class attendance is required, and it should be recognized that missing more than one to two days of a chemistry course is most unwise due to the pace of the course and the amount of material covered. It will be considered for “borderline” students when giving the final grade for the course.
8. Any student who has been approved for special academic accommodations through the Office of Learning Services (OLS) should discuss this with the instructor during the first week of classes.
Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment, comply with Title IX of the Education Amendments of 1972, 20 U.S.C. §1681, et seq., and act in accordance with guidance from the Office for Civil Rights, the University requires faculty members to report to the University’s Title IX Coordinator incidents of sexual violence shared by students. The only exceptions to the faculty member’s reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report to the person designated in the University Protection of Minors policy incidents of sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred.


**TUTORING HELP**

The Peer Learning Hours are:

- Tues. 6 – 8 pm in Roddy 256
- Wed. 2 – 4 and 6 – 8 pm in Roddy 256
- Thur. 2 – 4 and 6 – 8 pm in Roddy 256
- Sat. 12 – 3 pm in McNairy Library 118

The help will be available from the first Saturday after classes start (8/27).