

**Chemistry 108 C – General Chemistry I**  
**Course Syllabus**  
**Fall 2015**

**Instructor:**

Dr. Alice Suroviec  
asuroviec@berry.edu  
Office: Science Building 304A  
Phone: (706) 238-5869

**Office Hours:**

Mon./Wed. 9 – 11am  
Tues./Wed./Thurs. 2 – 4pm

**Lecture:** TR 12:30 – 1:45pm Room 113 MacAllister Building

**Requirements:**

*Text:* *Principles of Chemistry: A Molecular Approach; 2<sup>nd</sup> Edition* N. Tro

*ALEKS:* Each of you will need an access code. You will be required to use the ALEKS website to complete your homework.

*Calculator:* A scientific calculator with  $\ln x$ ,  $e^x$ ,  $\log x$ ,  $10^x$  and  $y^x$  functions is essential. A calculator such as a TI – 30X is suitable for this course. Programmable calculators such as Texas Instruments model TI-83 are not allowed.

**No sharing of calculators will be allowed on exams or quizzes.**

**Course Description:** This is the first of a two – semester sequence, CHM 108 and CHM 109, comprising an overview of general chemistry and is a 4 hour course with no prerequisites. In CHM 108 the principles and theories of matter will be overviewed as well as the reactions of various classifications of matter. General topics will include: classification of matter, inorganic nomenclature, atomic structure, the mole, stoichiometry, types of aqueous reactions, ideal – gas behavior, periodic trends in atomic properties, types and distinctions between types of bonding, thermodynamics and equilibrium. The laboratory consists of hands – on exercises that will further investigate the principles discussed in lecture. Semester credit hours 3-2-4.

**Purpose of the course:** This course is designed to provide a basic introductory background for those students wishing to pursue a career in chemistry or other science related professions. Chemistry 108 is a pre-requisite for Chemistry 109. These courses together will provide a rudimentary foundation for the other chemistry classes offered here at Berry College as well as other science courses that need an understanding of nature at its atomic level.

**Student Learning Outcomes:** Students will: (1) demonstrate an understanding of scientific and mathematical inquiry by using and interpreting appropriate chemical language, symbols, and data; (2) demonstrate their knowledge of fundamental chemical principles and their ability to apply these principles to chemical problems; (3) be able to articulate the strengths and weaknesses of scientific arguments, theories, and experimental designs; and (4) they will be familiar with many basic laboratory techniques and with using various chemical glassware, apparatus, and instrumentation.

**Assessment Measures:** Students will demonstrate an understanding of scientific inquiry and of scientific arguments, theories, and experimental designs by maintaining a record of laboratory work and responding satisfactorily to pre- and post-lab questions for each experiment. Upon completion of this course students will have demonstrated knowledge of the concepts and language used in chemistry to a 60% level as measured by homework, quizzes and tests. Additionally a comprehensive final exam written by the American Chemical Society will be given that will measure the level of understanding of the material. Laboratory skills will be assessed in the lab through lab reports.

**Methods of Instruction:** Chemistry 108 will be a predominantly lecture based course (using Power Point, white board and handouts) with a textbook that the majority of the material comes from. Students are expected to come to class have read the material assigned the previous class that will be covered that day's lecture. You will also be asked to sit in your study groups, as a portion of each days lecture will be done in small group form where small group will work on problems assigned in lecture. Questions in class as well as visits to office hours are encouraged

**Course Webpage:** The course webpage is <http://sites.berry.edu/asuroviec/>. It contains links to the course syllabus, PowerPoint slides, grade books as well as other pertinent information. Every effort is made to keep this page as up to date as possible.

**Study Groups:** During the first week of class each of you will be assigned to a study group of 3 students. I will ask for group preferences during the first week of classes and those that do not have a preference will be assigned a group. I ask that you sit in your study group during class. In class problems will be periodically assigned and group quizzes will be given on some Thursdays.

**Attendance Policy:** It is expected that class attendance will be 100% and that full attention will be given to any subject while present in class. The student will be held responsible for the material presented and any assignments made during a class session s/he was not able to attend. While attendance is not part of the grade in this course, it is necessary to do well. A student who has been absent continuously for one week will be reported to the Registrar.

**Laboratory:** Laboratory experiments are an essential element of any introductory course in chemistry. Laboratory work begins during the week for **August 24<sup>th</sup>**. Bring a pen and a calculator. You are required to attend each of your lab sessions. A separate lab syllabus will be provided during the first meeting of your lab. You will be required to purchase a bound lab notebook and goggles after your first lab meeting.

**Cell phones:** Even though cell phones now function as calculators, cell phones are NOT allowed during quizzes or exams. Additionally, cell phones need to be silenced during lecture for the consideration of myself and those around you.

**Grades:** The course grade will be based on the total points accumulated from the 3 regular exams, the final exam, quizzes, homework assignments and the general chemistry lab. Each of these are weighted as follows:

Exams 1-3	45% (15% Each)
Final Exam	15%
Lab	15%
Homework (ALEKS)	15%
Quizzes	10%
TOTAL	100%

Final Grades will be determined by total points accumulated and weighted by the table above. The final grading scale is shown below:

93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
60-66%	D
Below a 60	F

**Examinations:** There will be three regular examinations plus a final exam. The dates for the three regular exams are: **September 19<sup>th</sup>, October 24<sup>th</sup> and November 21<sup>st</sup>**. These dates are firm, and exams will be given during class time. Make-up exams will only be allowed for well-documented illnesses or absences approved in advance. Excuses must be presented in writing. Exams will not be moved so plan ahead.

**Final examination:** The nationally standardized test that is produced by the American Chemical Society will be taken on **Thursday December 11<sup>th</sup> at 8:00am**. Please note: This multiple-choice **cumulative** final encompasses an entire semester of chemistry. Therefore you will have to review all of Chemistry 108 to be successful on this exam.

**Quizzes:** At the **end** of some class periods, a short 10-point quiz will be given, except on exam days. These quizzes will be closely related to the problems assigned as homework.

I will allow you to take the quiz early, with my approval, but no late quizzes will be given. At the end of the semester the lowest quiz scores will be dropped and the remainder of the quiz scores used to compute the quiz grade. The thrown out quizzes are intended to make-up for illnesses, emergencies and/or absences due to scheduled Berry events. They are not intended to allow you to perform poorly on a quizzes.

**Homework:** At the end of most class periods I will give a homework assignment to be completed by the next period.

*Reading:* The reading assignment will be based on the material to be covered in the next lecture.

*Problem Sets:* Problems will be assigned daily from the material that is being covered in class. These problems will be graded on the web with the website ALEKS ([www.ALEKS.com](http://www.ALEKS.com)). These problems will be worth varying points and you will have multiple chances to enter the correct answer to receive full credit.

I will allow **3** assignments to be completed on class periods late with no penalty. After you have used the 3, no further late assignments will be accepted. Quiz and test problems will be closely related to these questions so it is in your best interest to do them and come to class with questions about them.

**Seminar attendance:** In order for a chemist to stay current with the latest trends in chemistry, it is important to keep up with the current topics in science. For this class, I require watching current videos on scientific breakthroughs. Watching and summarizing a video is worth 1 quiz grade (10 points). After requesting the video from me via email, you must email a paragraph summary within **ONE WEEK** of the request. After one week, I will no longer accept the summary.

**Extra Credit:** If you watch and summarize more than 1 video, you will receive extra credit points. For every two (2) summaries you complete beyond the one required (i.e. number 3, 5) your lowest quiz score will be converted to a 10. The maximum number of quizzes that may be replaced is 2. **THIS IS THE ONLY EXTRA CREDIT THAT IS AVAILABLE IN THIS COURSE**

**Additional Accommodations:** Students with disabilities who believe that they may need accommodations in this course are encouraged to contact the Academic Support Center in the Memorial Library (ext. 4080) as soon as possible to ensure that such accommodations are implemented in a timely fashion.

**Tutoring and Additional Help:** Chemistry is often a difficult topic and at times we all need a new way of looking at the same problem. It is in your best interest to seek out help as soon as you realize that you are struggling.

*Tutorial Availability:* If you would like to talk about the possibility of a tutor, please make an appointment with Ms. Maynard (233-4080 or [wmaynard@berry.edu](mailto:wmaynard@berry.edu)) Ms. Maynard is the head of Academic Success Center and she will put you in contact with an upper-level chemistry student who will meet with you for extra assistance. You may do this at anytime during the semester, but once you start, you must continue for the rest of the semester. This is a free service, but it is first-come, first-served.

*Keys to doing well:* General Chemistry I is often a difficult for many students. The level of expectation is much higher than it was for high school. Therefore, I suggest doing the following to do well in this course.

1. Study every day for 1-2 hours. Start doing this immediately
2. *Don't get lulled into a false sense of security during the first month of the course.* Much of the material will be a review of high school chemistry, however, after that you will encounter new material and must have good study habits all ready in place to succeed.
3. Read the assigned pages of the text. This will introduce you to the material that we will cover the next class period
4. Find a study buddy
5. Come to class every day

**FERPA:** Berry College statement of compliance with the 1974 Federal Family Educational Rights and Privacy Act (FERPA or the Buckley Amendment) states: "Grades should not be distributed or posted in any fashion that permits identification of the student by anyone other than the student." To facilitate the distribution of the graded quizzes, I will ask that each of you sign a form either granting or denying permission to hand quizzes back in a group manner where other students may see your scores. Exams are generally more private, so I will always hand these back individually. You will be able to access your current grades on VikingWeb, but it is your responsibility to keep your username and password private if you do not want to share your grades with others.

**Academic Integrity:** Please consult the Viking Code on pages 13 and 14 for the policy on Academic Integrity. Each student is expected to adhere to the policies outlined in the college's academic handbook. Students can work together on homework and in class work, but cannot work together on quizzes and exams. Cheating of any kind will not be tolerated. As in all of my classes, students will be asked to sign an integrity pledge on each quiz/exam. The pledge reads as follows:

"I affirm that I have neither committed nor witnessed a violation  
of academic integrity in the completion of this quiz/examination."

Any student found to have violated academic integrity would be subject to the following:

First Offense: No credit for the particular quiz/exam and a report filed to the Academic Dean's office.

Second Offense: Removal from the course, automatic failure in the course and a report filed to the Academic Dean's office.

### Tentative Course Schedule

Month	Date	Material to be Covered	Reading for the Week
August	25	Chapter 1 – Matter and Measurement	Chapter 1: pg. 2-31
	27	Chapter 2 – Atoms and Elements	Chapter 2: pg. 40 - 65
September	1 3		
September	8 10	Chapter 7 – Quantum – Mechanical Model	Chapter 7: pg. 252 - 280
September	15 17	Chapter 8 – Periodic Properties	Chapter 8: pg. 286 - 314
September	22 24	<b>Exam I – Chapters 1-2, 7-8</b>	Chapter 9: pg. 324 - 353
September October	29 1	Chapter 9 – Chemical Bonding I Chapter 10 – Chemical Bonding II	Chapter 10: pg. 360 - 372
October	6 8	Chapter 3 – Molecules, Compounds and Chemical Equations	Chapter 5: pg. 168 - 204
October	13 15	<b>Fall Break – No Class</b>	Chapter 6: pg. 212 - 243
October	20 22	Chapter 4 – Chemical Quantities	
October	27 29	<b>Exam II – Chapters 9-10, 3-4</b>	Chapter 3: pg. 72 – 103
November	3 5	Chapter 5 – Gases	Chapter 4: pg. 118 - 136
November	10 12	Chapter 6 - Thermochemistry	Chapter 4: pg. 138 - 158
November	17 19	<b>Exam III – Chapter 5-6</b>	
November	24 26	<b>Thanksgiving – No Class</b>	<b>No Reading – Thanksgiving Break</b>
December	1 3	Chapter 11 – Liquids and Solids Review	Chapter 11: pg. 408 - 419
December		<b>FINAL EXAM (8:00am – 10:00am)</b>	