General Chemistry I w/Lab, Chem 1214 (4 credits) LWC

10233 CRN (M-02) Fall 2013

A 3 credit lecture format course with 1 added experiential/practical lab credit for a total of 4 credits.

Instructor: Dr. Kalvin Gregory Office: 330 Fugitte

Office Hours posted on my door or by appointment and commonly by walk-ins. Also use email gregoryk@lindsey.edu for most communication. Ph = 270-384-7462

Times: M-02 9:30-10:20 am MWF (Lecture) 10:30 am-12:20 pm R (Chem 1210 Lab)

Lecture to be held in Fugitte 324 and lab in Fugitte 303

ALL COMMUNICATIONS FOR THIS COURSE WILL BE THROUGH YOUR LWC CAMPUS EMAIL

Course Description: Deals with the structure of the atom and matter, nomenclature, stoichiometry, thermodynamics, and chemical bonding. A two-hour laboratory series is included that correlates with the course's concepts. ***Prerequisite:*** MATH 1113. *Course rotation:* Fall.

Education Program Preparation:

This course is required for content preparation in the Biology Secondary Education Program as well as the Middle Grades Education Program, and prepares teacher candidates with the knowledge base required in the Kentucky Core Academic Standards and the College Career Readiness Standards. The Conceptual Framework of the Education Program, "Teacher as Leader for the 21st Century", is incorporated. The Division of Natural and Behavioral Sciences works with the Education Program in preparing the teacher candidates with the knowledge base required to meet Kentucky Teacher Standard I and the Education Program Student Learning Outcome for Content Knowledge. Teacher candidates will be equipped to teach K-12 students and meet requirements for Unbridled Learning.

Required Texts

General Chemistry, 10th edition, Darrell D. Ebbing and Steven D. Gammon, © 2013, 2011, Brooks/Cole, Cengage **ISBN-13:** 978-1-111-58087-2, **ISBN-10:** 1-111-58087-2. (To be referred to as Ebbing and Gammon)

Required Equipment

You will need a USB flashdrive/thumb drive, etc. so that you can store experimental data gathered in the laboratory for further use when completing your lab write-ups. You will also need a non-programmable scientific calculator. **NO CELL PHONE CALCULATORS ARE ALLOWED ON EXAMS**!

Course Objectives/Goals

This course is part of the requirements for the Biology (B. A. major/minor, A. A), Chemistry minor, Health Sciences, and Engineering Mechanics programs. It may also satisfy General Education Requirements of other majors.

This course will cover the topics listed in the tentative lecture/reading and exam schedule included later on in this document. The textbook for the course will be used as a *companion* to my lectures, as well as a source of practice problems for preparation for the exams. Therefore, attendance to lectures is necessary for success in this course. I reserve the right to delete topics from the course, or to slightly change the timeline given in the tentative lecture and exam schedule. Sometimes things happen, and adjustments have to be made.

STUDENT LEARNING OUTCOMES (SLO's) for this course.

Program SLO's:

Why is chemistry important? What should I get out of this class?

1	To understand the concepts of chemistry, which is a fundamental science relevant to success in a variety of degree/pre-professional programs, including, but not limited to: biological sciences, pre-medical, pre-dental, pre-physician's assistant, pre-engineering, pre-pharmacy, and pre-physical therapy.
	• This class surveys a broad scope of chemical topics relevant to the programs listed above. The understanding gained from this course should provide a thorough foundation for future major-specific topic areas.
2	To apply basic chemistry laboratory skills to solve problems.
	• Students will develop a feel for how science is done in the real world, which differs markedly from what is typically done in a lecture-only course.
3	To learn how to apply the scientific method to problems and projects in chemistry.
	• Understand these concepts well enough to apply them in a real-world scenario, where every day will seem like a final cumulative exam.
4	To learn how to communicate effectively using scientific language.

Institutional SLO's

Inquiry and Analysis

Students will demonstrate an ability to comprehend quantitative data, such as charts, graphs, figures, as well as raw lab data. Students will also demonstrate proficiency in making informed conclusions and judgements, as well as breaking down complex topics in order to better understand them. Assessment will be done according to the Inquiry and Analysis VALUE rubric.

Inquiry and Analysis: Description of the Signature Assignment

Students will write a 5-10 page paper discussing the application of the scientific method to a topic relevant to professions for which general chemistry is a core requirement (e.g. medical, dental, pharmacy, etc.) Students will be required to demonstrate application of a systematic approach to research to a student-chose topic specific or at least relevant to their discipline. Examples might include current developments in clinical laboratory chemistry, disease pathologies, pharmacology, drug

discovery medicinal chemistry, etc. Such an exercise will enable the student to gain an understanding of science in application, as well as how critical/analytical thinking skills, in combination with a systematic method of inquiry are applied to a real problem.

Grading:

Your grade for the semester will be determined as follows:

Each exam, homework, lab, etc. will be worth 100 points. To determine the overall score for each individual component (exams, homework, etc.), I will take the arithmetic average. For example, if your exam scores are as follows:

98, 88, 92, 93

The average of the exam scores would be 92.75. This would reflect your exam grade for the semester. To determine the final overall score, I will multiply each component score by its percentage of the total grade, and then add them together. For example, let's say your component averages are as follows:

Exams: 92.75 Homeworks: 95 Labs: 92 Paper: 88

I would then multiply each score by its percentage. The percentages are given below:

Exams (X4): 70%

Homeworks: 10%

Labs: 10%

Paper: 10%

Therefore, in this example, your grade would be:

92.75(0.70) + 95(0.10) + 92(0.10) + 88(0.10) = 92.425

Your letter grade would then be assigned as follows:

Composite score	**Letter Grade**
90 – 100	A
80 – 89.99	B
70 – 79.99	C
60- 69.99	D
0 – 59.99	F

I will be reporting mid-term and end-semester grades using the +/- system , however, for the rest of the semester, this system will not be used in reporting your grades. ***I reserve the right to adjust class exam scores and final scores (i.e. curving) at my discretion.*** This may or may not happen, but whatever the outcome, it is not negotiable. If you have any controversy with your grades, please bring them to my attention as soon as possible. Waiting weeks or until the very end of the semester will be very unlikely to elicit my sympathy.

If you are struggling, please see me in my office, and consider assistance via tutoring at the Academic Success Center.

Exams and Exam Formats

What will be covered on the exams?

The first thing that you should be aware of is that **ALL EXAMS ARE COMPREHENSIVE!** This means that, for example, on Exam # 3, you would expect to see some (not all) topics you first encountered on Exams #1 and #2.

The second thing that you should be aware of is that you may be asked questions pertaining to material that was not covered in class, but *was* given to you in your assigned reading. Therefore, just because I didn't mention it in class does not mean you will not see it on an exam.

Third, the labs you do will show up on your exams. This will include any theory, procedures, calculations, etc.

We will be doing the exams during the lab period. The reason for this is that it will allow you one hour and fifty minutes to complete the exam, and also, exams will not interfere with the lecture schedules. There will be four exams total. The fourth exam will be held during finals week.

Exam formats

The exams may consist of multiple choice or short answer questions/problems. When writing your answers or working through any problems, please **WRITE CLEARLY** and **SHOW ALL OF YOUR WORK**. If I can't read it or understand your train of thought, I cannot give you full credit. When writing a numerical answer (answer to a problem), please include the units with the answer (e.g. 3.57 moles, etc), and circle or underline or draw a rectangle around the numerical answer. In other words, make sure that I can readily locate the answer. It is in your best interest to present your work in the neatest, most detailed, and easily understandable way as possible.

How your exams will be graded:

1. Writing: In any exam question where you are asked to give an answer in short answer/essay form, you will be required to use correct English grammar. (Note: This applies to homeworks, lab write-ups, and your term paper as well). For exam, homework, and lab write-up questions, incorrect usage of English grammar, as well as spelling, will be penalized up to 10% of the point value of the question.

Please note: You will not *receive* points for using correct English spelling/grammar, but you will be penalized for *not* using it. Listed below are some things you need to be aware of when writing on an exam, homework, paper, etc:

i. Do not use/do any of the following:

a. mixed tenses

b. present tense

c. 1st person

d. conversational writing

e. contractions

f. sentence fragments

g. run-on sentences

h. subject/verb disagreement

ii. Be sure that you understand the distinction between and correct usage of the following (*seemingly*) similar words:

a. to, too, two

b. accept, except

c. there, their, they're

d. were, where, we're

e. then, than

f. affect, effect

g. a, an

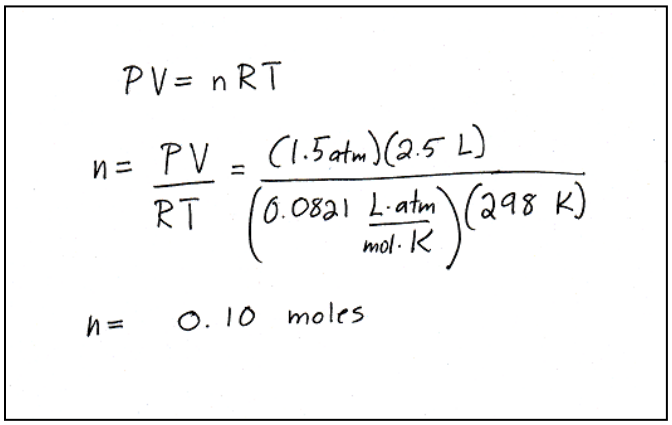
h. since, sense, cents

2. Partial credit on numerical problems

a. Subdivided problems: Subdivided problems are problems which have a part a), b), c), etc. I will grade these sections separately from one another. What this means is that, if you make a mistake on one part, I *may* award partial credit for the total point value of *that* part of the problem. So, if a 10 point problem has four parts, each part is worth 2.5 points. If you make a mistake on part a), I may award you partial credit on *that part*. For example, if I award you 90% credit on part a), you will receive 2.25 points. This will not affect the other parts of the problem. ***Therefore, I will not penalize you for any propagated***

errors. If you make a mistake on part a), I will penalize you. However, if you must use the answer to part a) in subsequent parts, I will not penalize you any further, provided that you do not make any more mistakes.

b. Obvious calculator errors: This happens frequently, because many students spend ridiculous sums of money on very powerful calculators, but are still unable to enter five numbers and get the correct answer. A typical example would be as follows:

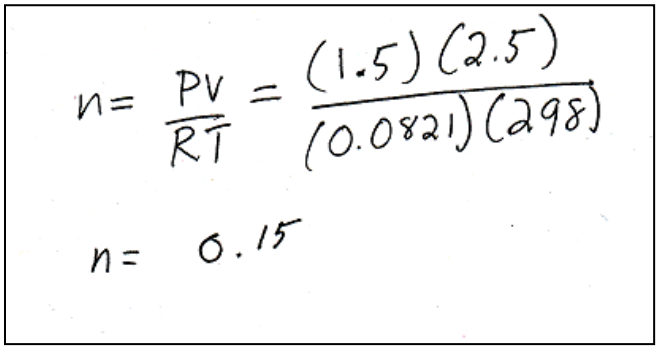


In this case, the problem is set-up correctly, but the final answer is incorrect. This can only be due to the fact that the student failed to enter all the numerical values, failed to carry out the correct order of operations, or both. For mistakes such as this, I will award 90% of the total point value, because the student obviously knew what they were doing, but somehow fumbled on the calculator. **This is why it is always a good idea to show *ALL* of your work explicitly.**

c. Other errors: The most credit you can receive for an error other than a calculator error is 50% of the total point value. The partial credit you receive will be at my discretion, and ***it is non-negotiable.***

Note: For numerical answers on homework or lab write-up problems, partial credit will not be awarded except in the case of a calculator error.

d. Failing to show your work and/or failing to show the correct units: In the example above, all of the units are shown in the calculation. This is the correct way to show your work on an exam. ***Shown below is the incorrect way:***



This time, the student got the answer right, but did not show the units. **Failing to include the units will result in a penalty of 10% of the total point value for the problem. Failing to show any work at all will result in a separate 10% penalty. This rule holds for homework/lab write-up problems as well.**

Homework

Homework assignments will be given throughout the semester. Late homeworks will not be accepted. If you have an *official* excuse for not being able to hand in a homework, I *may* decide to drop that particular homework grade from your homework average. *I do not recommend you do this*. Once I collect homework assignments, I will post an answer key on Blackboard later that day. **Use these answer keys to help you in studying for your exams.**

Your homeworks should be your own work, so please do not give me sufficient grounds for bringing an academic dishonesty charge against you. I would much rather not have to do this.

Do not wait until the evening before or the morning of a homework due date! The homeworks will typically be long and difficult, and so you will need to give yourself plenty of time to get them done, to work with a tutor if needed, or to come to me with questions if needed!

The Lab

The lab component of your grade will be the average of your lab write-ups. These will consist of the questions/calculations/graphs & figures that you are required for an individual lab. The lab handouts will tell you what you must turn in for a given lab. All of the lab handouts can be found on Blackboard in the Lab folder. **You must also read and be familiar with the following files (found in the Lab folder as well):**

1. lab-safety-rules.pdf

2. Labware.pdf

3. operating-instructions-lab-equipment.pdf

4. excel-tutorial.pdf

Lab Attendance: Your attendance is mandatory for all of these labs. We may or may not have time to do a make-up lab day. A make-up lab will be allowed only for officially accepted excuses. Non-excused absences from the lab will be assigned a grade of zero.

General Class Policies

Make-Up Exams

A make-up exam ***MAY*** be allowed if ***ALL*** of the following conditions are met:

The student informs me of the absence **before** the absence occurs. AND

I receive a written notice or email from a coach or sponsor of your required attendance, **prior** to the absence

OR

I receive a **hard-copy** Doctor's excuse from a non-relative, medical doctor that says you were too sick to attend class AND any other LWC function that day AND

You are in good academic standing in this course attendance, and you have a reasonable attendance record.

The assessment of good academic standing and reasonable attendance is solely up to me.

The make-up exam will be, out of obvious necessity, quite different from the exam as given to the rest of the class. NO MAKE-UPS ARE ALLOWED FOR FINAL EXAMS!

Attendance

Lecture attendance is taken daily at the beginning of each class. I will regard any late attendance as an absence. Attendance for the laboratory portion of the course will be taken in the same manner. Let me say here that "blowing off" a lab day is an extraordinarily stupid thing to do. There will be some make-up days for labs at the end of a semester, but only for students with the properly documented excuses.

Anyone using a cell phone/smart phone for texting, web surfing, gaming, or any other such unauthorized activity may be asked to leave the lecture room at the instructor's discretion. Cell phones need to be turned off, or volumes set to zero at the beginning of each class. We have a tremendous amount of material to cover this semester, so interruptions need to be kept to a minimum.

EWS system

I will be using the EWS system to alert your advisors/coaches of attendance and grade performance issues in this course, particularly early in the semester, after each exam, at midterm, and near the final drop date in the semester.

Cheating/Plagiarism:

The exams are all "closed-book", and you will not be permitted to have any notes, your textbook, crib-notes, any electronic resources, or your classmates' exams that are within your eyesight to help you during the exam unless otherwise stated. On exam day, you will be allowed to have pencils, erasers, and a non-programmable scientific calculator. Everything else must be stowed away in your backpack, etc.

Your laboratory reports must consist entirely of your own work. Your raw data, of course, will be identical to that of your lab partners, but everything else must come from you. Any similarity in wording, phrasing, or obvious copying of your lab partners' reports and worked problems will be considered cheating.

Cheating WILL NOT BE TOLERATED and will be dealt with very harshly. The definition and handling of academic dishonesty in this course will be solely at my discretion, and, at the minimum, will result in the

formal reporting of the incident to the Academic Affairs Office as a violation of the Academic Integrity Policies of the college.

Lecture Notes and Powerpoint Slides

I will be supplying you with my powerpoints used in the lectures. They will be posted on Balckboard before the class period(s) in which we will be going over them. The powerpoint slides and assigned problem sets will be your bread and butter for this course.

Learning the material for this course is *your responsibility.* My responsibility will be to facilitate your learning, as well as to assess your competency in this material. The Rule-of-Thumb for you to live by this semester is: two hours of study for each hour spent in class. The bulk of your study time should be focused on answering questions and working problems. Merely memorizing definitions and equations will not save you.

Reference Materials Section

Additional Reading:

Schaum's 3000 Solved Problems in Chemistry, © 1988, McGraw-Hill, Inc., **ISBN:** 0-07-023665-8

Tutoring:

If, for some reason, you find yourself struggling in this course, and you wish to have some help besides my office hours, you can find free tutoring available at the Academic Success Center, the Writing Center, and the Mathematics Center.

Per University requirements, I include the following in this syllabus by pasting standard university terminology and protocols.

LINDSEY WILSON COLLEGE
STATEMENTS FOR INCLUSION IN THE SYLLABUS
2013-2014

Academic Integrity

Academic integrity is essential to the existence of an academic community. Every student is responsible for fostering a culture of academic honesty, and for maintaining the integrity and academic reputation of Lindsey Wilson College. Maintaining a culture that supports learning and growth requires that each student make a commitment to the fundamental academic values: honesty, integrity, responsibility, trust, respect for self and others, fairness and justice.

To foster commitment to academic integrity, faculty are asked to require each student to place and sign the following Honor Code on tests, exams and other assignments as appropriate: **On my honor as a student, I have neither given nor received any unauthorized aid on this assignment/exam.**

Violations of the academic integrity policy include cheating, plagiarism or lying about academic matters. Plagiarism is defined as any use of another writer's words, concepts, or sequence of ideas without acknowledging that writer by the use of proper documentation. Not only the direct quotation of another writer's words, but also any paraphrase or summary of another writer's concepts or ideas without documentation is plagiarizing that writer's materials. Academic dishonesty is a profoundly serious offense because it involved an act of fraud that jeopardizes genuine efforts by faculty and students to teach and learn together. It is not tolerated at Lindsey Wilson College.

Students who are determined to have plagiarized an assignment or otherwise cheated in their academic work or examinations may expect an "F" for the activity in question or an "F" for the course, at the discretion of the instructor. All incidents of cheating or plagiarism are reported by the instructor to the Academic Affairs Office along with copies of all relevant materials. Each instance of cheating or plagiarism is counted separately. A student who cheats or plagiarizes in two assignments or tests during the same semester will be deemed guilty of two offenses. If the evidence is unclear, or if a second offense occurs, the VP for Academic Affairs or Associate Dean will work in cooperation with the Dean of Students to move the student before the campus Judicial Board for review. Violations will ordinarily result in disciplinary suspension or expulsion from the College, depending on the severity of the violation involved. **Note:** The College has purchased Turnitin.com, a web product used to detect plagiarized documents.

Questioning a Grade -- The Student Academic Complaint Policy

A student, who wishes to question **an assignment grade, or other academic issue**, should follow the procedure below:

1. Whenever possible, the student will first go to the faculty member who has assigned the disputed grade. Complaints regarding grades should be made within seven (7) days of receipt of the disputed grade and, if possible, will be decided by the faculty member within seven (7) days of receipt. If the disputed grade is the final grade for the course, "receipt" is defined by when the final grade is posted online by the registrar. (Please refer to the next section for appealing a final grade.)

2. Unless there are extenuating circumstances, the student may, within seven (7) days request in writing a review of such decision by the Chair of the division in which the grade was assigned. Upon receipt of such request, that Chair will direct the faculty member and the student to each submit, within seven (7) days, if possible, a written account of the incident, providing specific information as to the nature of the dispute.

3. Upon receipt of these written accounts, the Chair will meet, if possible, within seven (7) days with the faculty member and the student in an effort to resolve the dispute and will render his or her decision in writing.

4. If either the student or the faculty member desires to appeal the decision of the Division Chair, the student or faculty member may, within seven (7) days by written request to the chair, ask that the matter be reviewed by a Grade Appeals Panel convened by the Academic Affairs Office.

5. If the disputed grade is assigned at the end of a fall or spring semester and the student and faculty member cannot meet to resolve the issue, the student should contact the faculty member by e-mail within seven (7) days of receipt of the disputed grade. If the issue cannot be resolved by e-mail within the time limit, steps 2, 3 and 4 of the appeal may extend into the beginning of the semester immediately following receipt of the disputed grade by following the timeline above.

A student who wishes to question a **final grade** should follow the procedure below:

1. Confer with the faculty member who assigned the disputed grade.

2. If the disputed grade cannot be resolved, a written request for a grade appeal must be submitted to the Academic Affairs Office before the first day of the semester following the one in which the grade was issued. The written request must include the specific basis for the appeal.

3. The Academic Affairs Office will convene a Grade Appeals Panel, comprised of the Vice President for Academic Affairs, the Associate Academic Dean, and the chair of the academic unit which houses the course for which the grade is appealed. If one of the members is the faculty member who issued the grade, an alternate will be appointed. The student and the faculty member may appear separately before the panel to explain their positions. The hearing is non-adversarial. Neither the faculty member nor the student may be accompanied by other individuals to the meeting of the Grade Appeals Panel. The Grade Appeals Panel will notify the student of its decision, if possible, within seven (7) days of the meeting.

Policy for Verification of Student Identity and Protection of Privacy

In compliance with United States Federal Higher Education Opportunity Act (HEOA), Public Law 110-315, all credit-bearing courses and programs offered through distance learning methods must verify that the student who registers for a distance education course or program is the same student who participates in and completes the course or program and receives academic credit. One or more of the following methods must be used:

a) A secure login and pass code;
b) Proctored examinations; and/or
c) Remote proctoring of one of more examinations using Tegrity or other technologies

Verification of student identity in distance learning must protect the privacy of student information. Personally identifiable information collected by the College may be used, at the discretion of the institution, as the basis for identity verification. For instance, a student requesting that their learning system password be reset may be asked to provide two or more pieces of information for comparison with data on file. It is a violation of College policy for a student to give his or her password to another student.

Detailed information on privacy may be located at:
http://www.lindsey.edu/media/319883/Online%20Services%20Privacy%20Policy%204.20.12.pdf

Institutional Review Board (IRB) Policies

The Lindsey Wilson College Institutional Review Board (IRB) safeguards the rights and welfare of human participants in research and other research activities. Lindsey Wilson College faculty, staff, and students, which comprise its academic unites, and facilities, are subject to the IRB policies. This includes any research for which a research agreement (e.g. MOU) identifies Lindsey Wilson College Institutional Review Board (IRB) as the IRB of record. All student-led human subject research mush have a LWC faculty sponsor. All faculty members and students conducting human subject research are required to submit documentation of training on research involving human subjects that has been completed within two years of the onset of the proposed research. Online training is available at http://php.nihtraining.com/users/login.php.

Statement on Learning/Physical Disabilities

Lindsey Wilson College accepts students with learning disabilities and provides reasonable accommodation to help them be successful. Depending on the nature of the disability, some students may need to take a lighter course load and may need more than four years to graduate. Students needing accommodation should apply as early as possible, usually before May 15. Immediately after acceptance, students need to identify and document the nature of their disabilities. It is the responsibility of the student to provide to the College appropriate materials documenting the learning disability, usually a recent high school Individualized Education Program (IEP) and results from testing done by a psychologist, psychiatrist, or qualified, licensed person. The College does not provide assessment services for students who may be learning disabled. Although LWC provides limited personal counseling for all students, the College does not have structured programs available for students with emotional or behavioral disabilities. For more information, call Ben Martin at 270-384-7479.

Academic Success Center

The Academic Success Center, located in the Everett Building, offers peer tutoring to aid students in completing class assignments, preparing for exams and improving their understanding of content covered in a particular course. In addition, computers are available for student use.

Students are encouraged to utilize this Center as a resource for improving study strategies and reading techniques. The Center also offers assistance with other academic problems resulting from documented learning disabilities. All services are free of charge to all Lindsey Wilson College students (students with learning disabilities are responsible for providing documentation from an appropriate outside professional source such as a professional evaluation or school IEP). Please contact Maretta Garner, Tutor Coordinator at 384-8037 for further information and assistance.

Writing Center and Mathematics Center

The Writing Center (located in the Slider Humanities & Fine Arts Building), and the Mathematics Center (located in the Fugitte Science Building) are available for specialized tutoring at no charge to students. Please contact Jared Odd, Writing Center Coordinator, at 384-8209 or Linda Kessler, Math Tutor Coordinator, at 384-8115 for further information and assistance.

Final Exams

Final Exams for day classes are scheduled for the Fall 2013 semester on **December 9-13 and May 5-9** for the Spring 2014 semester. The academic calendar, which contains the schedule for finals, is in the College Catalog and course schedule listing. Please make any necessary flight arrangements **after** the final exam week. **Students will not be permitted to take early finals** unless extenuating circumstances exist. "Extenuating circumstance" means illness, a verified family emergency or participation in officially sponsored travel in support of an event arranged by the College. **Travel arrangements must be made in sufficient time** that tickets may be obtained after final exams and the semester is officially over. All requests for early finals must be made in person to the Academic Affairs Office.

Email Policy

All Lindsey Wilson College students are required to communicate with LWC faculty and staff via LWC (Lindsey.edu) email addresses only. Alternative email addresses should not be used when communicating with LWC faculty and staff**.**

Cell Phone Policy

Student cell phones will be off during class time unless prior arrangement is made with the instructor.

Adding/Dropping a Course

Students enrolled in the following courses cannot drop these classes during the semester: READ 0713, 0723, 0733, 0903, 1013 and 1023; STSK 1003; ENGL 0903 and 0904; and ESL 0803, 0804 and 0854.

For undergraduate classes at the Columbia campus, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the advisor and the instructor for each course involved as indicated on the Add/Drop Form. The change must be reported to the Business Office and the Registrar's Office on an Add/Drop Form, which may be obtained from the Registrar's Office. For AIM courses, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the Director of the Evening Program. For courses taught at Community sites, adding a course, dropping a course, or changing from one section of a course to another section of the same course requires the approval of the Site Coordinator for the campus. Permission to add courses will not be given after the last date for late registration. Authorization for dropping a course will not be approved after more than 75% of the instructional days for a course are completed, as outlined below:

Course	Deadline	Submitted by the Student to
Columbia undergraduate and graduate full semester courses	Not later than 30 days before the end of the semester	Registrar
AIM courses	By the sixth week of class	Registrar
Courses at Community Campuses	By the third weekend of class	Site Coordinator or the Registrar

If changes are not properly approved and officially reported as stated above, students will receive a grade of F in the courses for which they are officially registered, and they will be charged for all such courses. Students will not receive credit for changed or added courses unless they officially register for those courses.

Tentative Lecture and Exam Schedule

Aug 21, 23, 26: Introduction & Chapter 1 Chemistry and Measurement

Assigned reading: Chapter 1 (All), Appendix A: Mathematical Skills, Blackboard: 1. Lab folder: lab-safety-rules.pdf, labware.pdf, operating-instructions-lab-equipment.pdf, excel-tutorial.pdf, 2. Math tutorials folder: logarithms-tutorial.pdf, roots-and-exponents.pdf

Aug 28, 29 Sep 4: Chapter 2 Atoms, Molecules, and Ions

Assigned reading: Chapter 2 (All)

Sep 6, 9, 11: Chapter 3 Calculations with Chemical Formulas and Equations

Assigned reading: Chapter 3 (All)

Exam 1 Sep 12

Sep 13, 16, 18: Chapter 4 Chemical Reactions

Assigned reading: Chapter 4 (All)

Sep 20, 23, 25, 27: Chapter 5 The Gaseous State

Assigned reading: Chapter 5 (All)

Sep 30 Oct 2: Chapter 6 Thermochemistry

Assigned reading: Chapter 6 (All *except* 6.9)

Oct 4, 7, 9: Chapter 7 Quantum Theory of the Atom

Assigned reading: Chapter 7 (All)

Exam 2 Oct 10

Oct 11, 21, 23: Chapter 8 Electronic Configurations and Periodicity

Assigned reading: Chapter 8 (All)

Oct 25, 28, 30: Chapter 9 Ionic and Covalent Bonding

Assigned reading: Chapter 9 (All)

Nov 1, 4, 6 : Chapter 10 Molecular Geometry and Chemical Bonding Theory

Assigned reading: Chapter 10 (All)

Exam 3 Nov 7

Nov 8, 11, 13: Chapter 11 States of Matter; Liquids and Solids

Assigned reading: Chapter 11 (All)

Nov 15, 18, 20: Chapter 12 Solutions

Assigned reading: Chapter 12 (All)

Nov 22, 25, 27 Dec 2, 4, 6: TBA

Exam 4 Monday December 9 8-10:30 a.m. **(Finals Week)**

PLEASE NOTE: YOU ARE NOT RESPONSIBLE FOR READING ANY SECTIONS LABELED "A CHEMIST LOOKS AT…." OR "INSTRUMENTAL METHODS"

The tentative course exam schedule is:

Exam 1	**Thursday**	**Sep 12**
Exam 2	**Thursday**	**Oct 10**
Exam 3	**Thursday**	**Nov 7**
Exam 4	**Monday**	**Dec 9 at 8:00 am-10:30 am**

Any modification of this schedule will be discussed beforehand in class.

Tentative Laboratory Schedule

Aug 22 Orientation to the Lab

Aug 29 Lab # 1 Basic Laboratory Techniques

Sep 5 No Lab

Sep 19 Lab # 2 Electrolytes

Sep 26 Lab # 3 Empirical Formula of a Hydrate

Oct 3 Lab # 4 Acid-Base Titration

Oct 24 Lab # 5 Ideal Gas Laws

Oct 31 Lab # 6 Hess's Law

Nov 14 Lab # 7 Heat of Vaporization

Nov 21 Lab # 8 Spectrophotometry Lab 1

Dec 5 Make-up Lab

Important dates:

Aug 27: Last day to register or add a day class

Sep 2: Labor day (no class)

Oct 14-18: Fall Break (no class)

Nov 11: Last day to drop a class or withdraw

Nov: 28, 29: Thanksgiving (no class)

Dec 9: Last day of class

Dec 9-13: Finals week