

CHEM1211K, Principles of Chemistry I

Course Instructor:

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Office hours:

Tuesday & Thursday, 12:00 pm - 1:00 am/pm

During office hours, you can find me in TLC 2125. You can also reach me during office hours at the above phone number.

(although I am at my desk most days at lunch time, and the pager is about useless. You can also email me and set up a time to talk!)

NOTICE: Please use the internal course e-mail for general correspondence. I provide my external e-mail address for emergencies only. I cannot answer questions, accept assignments, or discuss grades via external e-mail so please use it for emergencies only.

Response Time: Unless you are notified otherwise, I will work to respond to all student questions and emails within 24 hours during the week and within 48 hours during the weekend.

Accessibility Services: If you are a student who is disabled as defined under the Americans with Disabilities Act and require assistance or support services, please notify me prior to attempting any activities or assessments in this course.

Also, **students with disabilities or who require special testing accommodations should contact the Testing Coordinator before scheduling an exam appointment.** In order to receive special accommodations, students must provide documentation from the disabilities center at their affiliate institution or from the Regents Center for Learning Disorders.

Testing Coordinator: etesting@westga.edu / 678-839-5300

Other resources:

<https://ecore.usg.edu/current-students/accessibility-services>

<http://www.section508.gov>

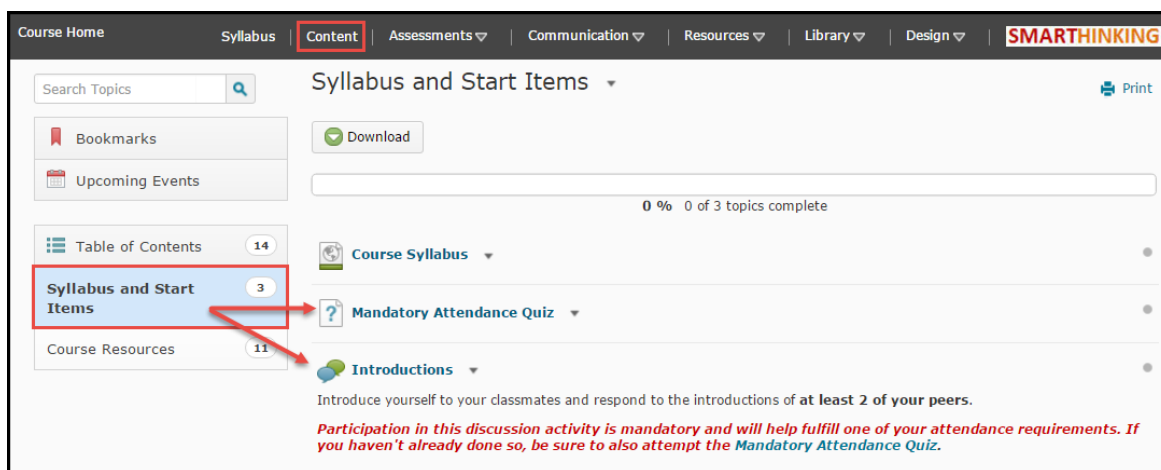
<http://www.w3.org/TR/WCAG/>

<http://webaim.org/>

Attendance Verification

IMPORTANT- In order to confirm your attendance and participation in this course, you must complete the Mandatory Attendance Quiz AND the Introductions discussion activity before the participation deadline. Please note that failure to complete these activities may result in you being removed from the course.

Participation dates for the term can be found in the News widget on your course homepage or at the following URL: <https://ecore.usg.edu/courses/calendar/index.php>. BOTH of these activities are required and can be found within the Course Content's Syllabus and Start Items folder.



The screenshot displays the 'Syllabus and Start Items' folder in the course content area. The folder is highlighted with a red box, and a red arrow points to it from the 'Table of Contents' sidebar. The folder contains three items: 'Course Syllabus', 'Mandatory Attendance Quiz', and 'Introductions'. A progress bar at the top of the folder indicates '0 % 0 of 3 topics complete'. The 'Mandatory Attendance Quiz' item is also highlighted with a red box, and a red arrow points to it from the 'Syllabus and Start Items' folder. The 'Introductions' item is also highlighted with a red box, and a red arrow points to it from the 'Syllabus and Start Items' folder. The 'Introductions' item description states: 'Introduce yourself to your classmates and respond to the introductions of at least 2 of your peers. Participation in this discussion activity is mandatory and will help fulfill one of your attendance requirements. If you haven't already done so, be sure to also attempt the Mandatory Attendance Quiz.'

Course Description:

First course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Topics to be covered include composition of matter, stoichiometry, periodic relations, and nomenclature.

This course has a laboratory component that requires the purchasing of a lab kit. The kit can be used for both CHEM 1211K and CHEM 1212K. Information on purchasing the lab kit—and accompanying course materials—can be found by accessing the following link:

<https://ecore.usg.edu/courses/textbooks.php>

Students will not be allowed to stay in the course without purchasing a lab kit unless a different arrangement has been made with the instructor (see unauthorized collaboration below). Students will also be required to purchase additional laboratory materials (commonly found household items and chemicals that may be purchased at local retailers).

NOTE: Please read this entire statement carefully. This course is taught completely online through eCore. This course will count as area D lab science, but it is generally considered for Science and Engineering majors. It is also for students advancing to pre-professional programs in medicine, dentistry, and pharmacy. Only students from the state of Georgia will be allowed to register.

The course runs the length of a semester. It is not a self-paced or an independent study course. The instructor will establish the pacing of the course and will inform you of due dates for assignments, discussion activities, and quizzes.

Course Credit Compliance:

This course will be delivered entirely online with the exception of the minimum of one face-to-face (FTF) proctored exam and a maximum of two FTF proctored exams. This requires the online equivalent of 3000 minutes of instruction (instruction time) and an additional 4500 minutes of supporting activities. As such, you will be required to complete the following online activities during this course (times are approximate):

Instruction Time	
Discussion Postings	700 minutes
Virtual meetings/chat or audio & video	700 minutes
Course Content Facilitation	700 minutes
Online labs and lab reports/homework assignments/pre-lab and post-lab quizzes/laboratory notebooks/assessments	600 minutes
Proctored Exams	300 minutes

It is anticipated that students will need to work independently for twice the number of minutes listed above to complete the online activities.

Prerequisites:

- MATH 1113 – Precalculus

Course Objectives:

After completing the eCore CHEM 1211K course, you will be able to:


- Demonstrate knowledge and understanding of the following topics:
 - Matter and measurement
 - Reactions and reaction stoichiometry
 - Thermochemistry
 - Properties of gases
 - Periodic properties of elements
 - Atomic structure, chemical bonding, and molecular bonding theories
- Use correct chemical nomenclature, structural symbols, and terminology to accurately communicate in standard English chemical principles, theories, and processes.

- Employ critical thinking and systematic methods to solve problems, including conceptual and quantitative problems.
- Demonstrate an awareness of the role of chemistry in everyday life
- Apply the rules of laboratory safety
- Collect and analyze scientific data, formulate appropriate conclusions from data analyses, and communicate findings.

Course Materials and Resources

ORDER YOUR MATERIALS IMMEDIATELY. YOUR ASSIGNMENTS ARE DEPENDENT UPON THESE ITEMS.

Course Text: eCore has explored cost-reducing options for students and currently offers an open source text for this course. The term *open* implies information or technology that is shared freely without copyright restrictions.

Title	<i>Chemistry</i>
Senior Contributors	Paul Flowers, Klaus Theopold, and Richard Langley
Publisher	OpenStax College by Rice University
Edition/Year	2015
Access	Full-Text PDF Download
	https://openstaxcollege.org/textbooks/chemistry/get
Type (Required/Optional)	Required (embedded throughout the course content)
License	License CC BY 4.0  http://creativecommons.org/licenses/by/4.0/

Course Lab Kit:

You are required to purchase a lab kit for this course. See ordering information below:

URL: <http://www.testkitsupply.com/>

Username (case sensitive): ecore

Password (case sensitive): studentkits

1. Select "Place Order"
2. Search for EC-5100-KIT OR select "Student Kits" from the menu on the left
3. Enter "1" in the "Quantity" text box and click "Add"
4. The kit will appear in your "Shopping Cart" on the left
5. Select "Review Order" and input your billing and shipping information

Course Materials List:

1. Laboratory Notebook
2. Fire Extinguisher
3. Digital Thermometer (F° and C°) (Note: If purchasing a new thermometer, try to locate a probe style thermometer that will fit inside of a test tube.)
4. Salt (NaCl)
5. Ruler (needs to measure centimeters)
6. Calculator with Scientific Notation and Log abilities
7. Stopwatch
8. Sleeve of 8 oz. Styrofoam cups
9. Paper Towels
10. Scissors
11. Isopropyl Alcohol
12. Graduated Measuring cup
13. Empty can (soup or vegetable can)
14. Cereal box
15. Clear plastic cups
16. 2 - 1 liter (or larger) soda bottles with screw caps
17. Steel nuts and bolts
18. 6 – 7” red helium-grade balloons filled with air
19. 3 – 12” blue helium-grade balloons filled with air
20. Tums
21. Tape Measure
22. Iron Nail
23. 5 Half Gallon Plastic Bottles (such as milk bottles) (Recycle Code 2)
24. Polyethylene terephthalate (PET or PETE, code 1) plastic sample (soda bottles, medicine jars (not prescription bottles), peanut butter jars)
25. High-Density Polyethylene (HDPE, code 2) plastic sample (milk jugs, motor oil, shampoo, conditioner, soap, and detergent bottles)
26. Low-Density Polyethylene (LDPE, code 4) plastic sample (plastic grocery bags, plastic cling wrap, sandwich bags, squeezable bottles)
27. Polypropylene (PP, code 5) plastic sample (plastic diapers, Tupperware, margarine containers, yogurt containers, syrup bottles, prescription bottles and some bottle caps.)
28. Empty Paper Towel Tube/Roll

Bookstore: The eCore textbook listing and eCore bookstore information can be found here: <https://ecore.usg.edu/courses/textbooks.php>. It is recommended that you order your required course materials from the MBS Direct Online Bookstore found here: <http://bookstore.mbsdirect.net/ecore.htm>.

Planet eCore Visit the Planet eCore blog to read about eCore students, faculty, and trends in online education: <http://planetecampus.blogspot.com>.

Technical Requirements and Assistance

Requirements: Having a correctly configured computer will help ensure your success in eCore. Check the information at <http://ecore.usg.edu/prospective/techreqs.php> to be sure that your computer meets all the necessary technical requirements for hardware and software. Links to the plug-ins (special free software) that you will need are provided.

Assistance: For technical assistance contact the 24/hour helpline at <https://D2LHelp.view.usg.edu/> (scroll down to the Student Support area).

In addition, please contact the eCore Helpline at 678-839-5300.


Flash Player / QuickTime: You may need Flash Player to use some of the content contained within this course. The players are free and available from the Web. Visit <http://www.adobe.com/>. Download the players and install them on your machine during the first few days of class. You may also want to download the QuickTime player from <http://www.apple.com/quicktime/>.

Discover an Error?

If you discover a typo, broken image, or other error in your eCore course, use the [eCore Student Change Request Form](#) to report the required change. Once the form is submitted, an eCore staff member will contact you within 48 hours.

Please note that this form is NOT for grade related or instructor related complaints. To report this type of information, please access the [Student Complaint Policy](#) page on the eCore website.

Smarthinking Online Tutoring:

Smarthinking is an online tutoring resource for eCore students providing assistance in Mathematics (basic Math through Calculus), Chemistry, Physics, Statistics, Spanish, and Writing. For login instructions, please refer to the [Smarthinking page](#) located within Course Resources or access Smarthinking directly using the  icon from the course navigation bar.

Grading and Standards

Grade Breakdown

GRADED ACTIVITY	WEIGHT	PROCTORED? (face-to-face)	BRIEF DESCRIPTION
Online Participation	10%	N/A	You will be required to submit photo documentation for each assigned lab activity. In order to earn full participation points, you must submit the minimum number of required photos for each lab. More information can be found in the lab activities.
Unit Quizzes	25%	N/A	Each unit will conclude with a Unit Quiz. Each quiz has approximately 20 questions and will assess your knowledge of the presented concepts.
Lab Activities	20%	N/A	You will be required to complete a lab activity with each unit. Lab activities include a procedure, pre-lab quiz, post-lab quiz, and discussion.
Homework Exercises	15%	N/A	Each unit contains multiple homework exercises you help you practice and better understand the concepts presented.
Midterm Exam	15%	YES	A minimum of one proctored exam is <i>required</i> for successful completion of this course. Please be on the lookout for detailed information from your instructor regarding this exam.
Final Exam	15%	YES	A minimum of one proctored exam is <i>required</i> for successful completion of this course. Please be on the lookout for detailed information from your instructor regarding this exam.

Proctored Exams

A proctored experience is required for successful completion of an eCore course. Failure to take the proctored exams will result in automatic failure for the course.

Proctored exams are password protected exams taken at an approved testing center or testing service. Students are responsible for scheduling and taking their exams by the posted deadline. Students are also responsible for being aware of the conditions and policies under which the exam will be proctored and administered. Each testing center or service sets its own proctor fee.

To register for your proctored exam, navigate to the Course Home and scroll down to the Proctored Exam Setup widget.

Important Dates!

Mid Term Registration Deadline: September 22, 2016

Mid-term Exam Window: September 29 - October 03, 2016

Final Registration Deadline: November 01, 2016

Final Exam Window: November 30 - December 05, 2016

Proctored Exam Permitted Resources: calculator, pencil, blank paper for calculations. You will be provided with an in exam formula sheet and periodic table.

Grade Turnaround

All assignments and assessments will be graded within one week's time.

Grade Scale

Grades are based on student performance and capability. Simply turning in all the assignments does not guarantee that the student will receive a "good grade." To receive a higher grade, a student must demonstrate proficiency in the material. For different students, gaining that proficiency requires different levels of work, because not all students walk into the class with the same aptitude for the course content. The standards for the respective grades are as follows:

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- F: 0-59%

Expectations and Standards

A – To achieve this grade the student must display superior performance in his/her course work. This includes demonstrating the ability to process and comprehend complex ideas, and to be able to convey those ideas to others in a clear, intelligent manner. An "A" student will go beyond simple requirements and seek to excel in his/her preparation for and presentation of assigned work. He/she will demonstrate excellence in communication skills and the ability to contextualize material.

B – To achieve this grade the student needs to display above average performance in his/her course work, including demonstrating the ability to process and comprehend complex ideas, while being able to convey those ideas in a clear, intelligent manner. A "B" student will also go beyond minimum requirements in terms of preparation and presentation of assigned work.

He/she will demonstrate above average communication skills and ability to contextualize material.

C – For this grade the student must meet the minimum requirements for the course, displaying adequate performance in his/her course work, and adequately demonstrate the ability to comprehend complex ideas, while also being able to convey those ideas in a like manner. A "C" student demonstrates competence in terms of preparation and presentation of assigned work. He/she will demonstrate adequate communication skills and ability to contextualize materials.

D – A student receiving this grade is performing below the minimum requirements for the course. This could include failure to complete or turn in assignments on a timely basis, or failure to adequately demonstrate the ability to comprehend or convey complex ideas. A "D" student performs below the average in terms of preparation and presentation of assigned work. He/she may not be demonstrating adequate communication skills or ability to contextualize materials.

F – A student receiving this grade has failed to meet the requirements of the course, including failure to complete or turn in assignments, or failure to demonstrate the ability to comprehend or convey complex ideas. An "F" student has not performed in a manner satisfactory to the standards of the class.

Attendance, Participation, and Late Policy

"Attendance" and participation are required. You will be expected to participate in ongoing discussions of the lesson topics and to interact with other students and your instructor regularly. It is expected that you will demonstrate a positive attitude and courtesy toward other participants in the discussion and observe good discussion netiquette. Be sure to read and observe the following procedures:

- You are a guest in the instructor's classroom, so be sure to observe the class rules.
- Practice manners and civility, and be polite and respectful of your instructor and classmates in all your communication.
- Respect your instructor, and be on time in your work submissions.
- Keep your instructor informed of your status.
- Address your instructor as Professor or Doctor.
- Use correct grammar and punctuation in all your communication ('Dear Professor xxx' not 'Hey').
- Accept your instructor's feedback and learn from it.

In the online environment, problems associated with power outages, networks being down, and ISP troubles inevitably result in legitimate reasons for delays, however, you should still be

prepared to deliver your work by the stated deadlines. If you have a problem, let your instructor know as soon as possible. The student who repeatedly turns in late work will be subject to penalties.

Time Commitment:

Taking an online course is not easier or faster. On the contrary, it will take as much time as taking a face-to-face class or more. If you normally go to class 3 hours per week per course, you will need to devote that same amount of time to your online course. In addition to online time, you should spend time studying and working with course materials several hours per week offline. It will be helpful to set aside regular study time when you can work uninterrupted. Offline time could be spent in composing messages to post online, reading, studying, and working homework problems.

The amount of time it will take you to complete the work for the course will depend on many factors, which will vary with each individual. Students can expect to spend anywhere from 8 - 15 hours per week on this course. Consult the course Calendar and your instructor to be sure you are on schedule, keeping up with the material and taking quizzes on time.

As a general rule, in this course you will be expected to:

- Log in regularly to check messages from your instructor and other students.
- Check the Calendar for announcements from your instructor.
- Study, read online materials, and work all assigned problems for each lesson.
- Complete all course work and assignments in the time allowed.

Late Policy

No late work is accepted without a proper medical excuse. If you know of a conflict or other circumstance that will prevent you from turning your work in on time, please discuss with your professor about the possibility of turning it in early.

Unit and Lab Activity Breakdown

The following units are covered in this course.

- Lab Safety
 - Safety Lab
- Unit 1: Essential Ideas
 - Measurement, Numbers, & Dimensional Analysis Lab
- Unit 2: Atoms, Molecules, & Ions
 - Density Lab

- Unit 3: Composition of Substances & Solutions
 - Solutions Lab
- Unit 4: Stoichiometry of Chemical Reactions
 - Acid-Base Titration Lab
- Unit 5: Thermochemistry
 - Heat Capacity Lab
- Unit 6: Electronic Structure and Periodic Properties of Elements
 - Nature of Light Lab
- Unit 7: Chemical Bonding and Molecular Geometry
 - Lewis Structures Lab
- Unit 8: Advanced Theories of Covalent Bonding
 - VSEPR Lab
- Unit 9: Gases
 - Antacids Lab

Academic Honesty

(Acknowledgment is hereby given to Georgia State University on whose policy this is based).

As members of the academic community, all students are expected to recognize and uphold standards of intellectual and academic integrity. The University System of Georgia assumes as a basic and minimum standard of conduct in academic matters that students be honest and that they submit for credit only the products of their own efforts. Both the ideals of scholarship and the need for fairness require that all dishonest work be rejected as a basis for academic credit. They also require that students refrain from any and all forms of dishonorable or unethical conduct related to their academic work.

In an effort to foster an environment of academic integrity and to prevent academic dishonesty, students are expected to discuss with faculty the expectations regarding course assignments and standards of conduct. In addition, students are encouraged to discuss freely with faculty, academic advisers, and other members of the academic community any questions pertaining to the provisions of this policy.

Definitions and Examples

The examples and definitions given below are intended to clarify the standards by which academic honesty and academically honorable conduct are to be judged.

- Plagiarism
- Cheating on examinations
- Unauthorized Collaboration
- Falsification
- Multiple Submissions

- Evidence and Burden of Proof

The list is merely illustrative of the kinds of infractions that may occur, and it is not intended to be exhaustive. Moreover, the definitions and examples suggest conditions under which unacceptable behavior of the indicated types normally occurs. However, there may be unusual cases that fall outside these conditions that also will be judged unacceptable by the academic community.

Plagiarism

(NOTE: Plagiarism detection systems are often used by eCore faculty members. For example, see the following site: http://turnitin.com/en_us/training/student-training. Faculty are also advised to report violations to the eCore Administrative offices for investigation.)

Plagiarism is presenting another person's work as one's own. Plagiarism includes any paraphrasing or summarizing of the works of another person without acknowledgment, including the submitting of another student's work as one's own. Plagiarism frequently involves a failure to acknowledge in the text, notes, or footnotes the quotation of the paragraphs, sentences, or even a few phrases written or spoken by someone else.

The submission of research or completed papers or projects by someone else is plagiarism, as is the unacknowledged use of research sources gathered by someone else when that use is specifically forbidden by the instructor. Failure to indicate the extent and nature of one's reliance on other sources is also a form of plagiarism.

Finally, there may be forms of plagiarism that are unique to an individual discipline or course, examples of which should be provided in advance by the instructor. The student is responsible for understanding the legitimate use of sources, the appropriate ways of acknowledging academic, scholarly, or creative indebtedness, and the consequences of violating this responsibility.

Cheating on Examinations

Cheating on examinations involves giving or receiving unauthorized help before, during, or after an examination. Examples of unauthorized help include the use of notes, texts, "crib sheets," websites, electronic documents or notes, and computer programs during an examination (unless specifically approved by the instructor), or sharing information with another student during an examination (unless specifically approved by the instructor). Other examples include intentionally allowing another student to view one's own examination and forbidden collaboration before or after an examination.

Unauthorized Collaboration

Submission for academic credit of a work product, developed in substantial collaboration with other person or source but represented as one's own effort, is unauthorized. Seeking and

providing such assistance is a violation of academic honesty. However, collaborative work specifically authorized by an instructor is allowed.

Falsification

It is a violation of academic honesty to misrepresent material or fabricate information in an academic exercise, assignment or proceeding. Some examples of falsification are:

- false or misleading citation of sources
- the falsification of the results of experiments or of computer data
- false or misleading information in an academic context in order to gain an unfair advantage.

Multiple Submissions

It is a violation of academic honesty to submit substantial portions of the same work for credit more than once without the explicit consent of the instructor(s) to whom the material is submitted for additional credit. In cases in which there is a natural development of research or knowledge in a sequence of courses, use of prior work may be desirable, or required. However, the student is responsible for indicating in writing, that the current work submitted for credit is cumulative in nature.

Evidence and Burden of Proof

In determining whether or not academic dishonesty has occurred, guilt must be proven by a preponderance of the evidence. This means that if the evidence that academic dishonesty occurred produces a stronger impression and is more convincing compared to opposing evidence, then academic dishonesty has been proven. In other words, the evidence does not have to be enough to free the mind from a reasonable doubt but must be sufficient to incline a reasonable and impartial mind to one side of the issue rather than to the other. Evidence, as used in this statement, can be any observation, admission, statement, or document that would either directly or circumstantially indicate that academic dishonesty has occurred. Electronic means may be used to monitor student work for the inappropriate use of the work of others.

Consult your eCore Student Guide at <https://ecore.usg.edu/students/guide/index.php> for further details on the eCore Academic Honesty Policy.