

VALENCIA COLLEGE

Lake Nona Campus

**Syllabus CHM 1046C**  
**General Chemistry with Qualitative Analysis II**

---

**Course Information:**

Course Prefix/Number: **33575**

Course Title: CHM1046C

Semester: Summer 2013

Units: 4

Class Days/Times: Friday - 9:45 am – 1:55 pm

Site/Room: LNC Room # 304

Friday - 9:45 am – 1:55 pm

Site/Room: LNC Room # 350

Instruction mode: Combined lecture lab  
30<sup>th</sup>

Duration: June 18<sup>th</sup> – July

Prerequisites: Prerequisite: CHM 1045C with C or better.

**Instructor Information:**

Name: Dr. Lynta Thomas

Email Address: lthomas87@mail.valenciacollege.edu

Phone/Voice Mail: **407-582-7111**

Office hours: On request.

**IMPORTANT DATES:**

**Summer 2013 Term Drop / Refund Deadline (11:59pm) : June 24<sup>th</sup>, 2013**

**Summer 2013 Term Withdrawal Deadline: "W" grade (11:59pm): July 19<sup>th</sup>, 2013**

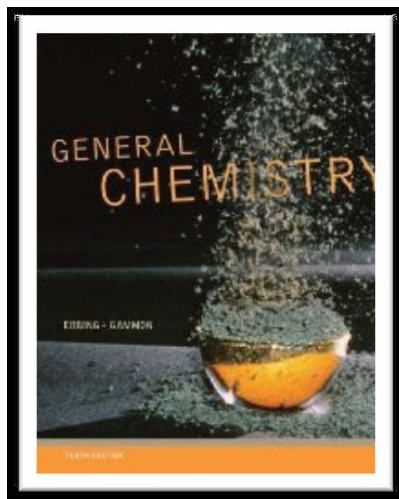
**Summer 2013 Day and Evening Classes end: July 30<sup>th</sup>, 2013**

**Final Exam July 30<sup>th</sup>, 2013**

## Academic Calendar with Important Dates:

<http://valenciacollege.edu/calendar/documents/2012-13ImportantDatesCalendarFinal.pdf>

## Course Texts and Materials



**Textbook:** *General Chemistry, 10th ed.* Ebbing and Gammon. ISBN- 1-285-05137-8

A student solution manual is available, but optional.

**Laboratory Manual:** Uploaded in the Blackboard course.

**Calculator:** A non-programmable calculator is required for exams. If needed, a TI-30XA will be provided.

**Other required items to each class:**

Lab Note book, pen, pencil, eraser, goggles, lab coat (optional), plain white paper to write lecture notes.

## Course Description:

Continuation of CHM 1045C dealing mainly with equilibrium theory, thermodynamics, chemical kinetics and electrochemistry. Laboratory illustrates principles of ionic equilibria within framework of qualitative analysis.

## Course Objectives:

Upon completion of this class, the student will be able to:

- Students Will Apply the Concepts of Mass Action Relationships to Solve Chemical Equilibria Problems.
- Students Will Apply the Concepts of Thermodynamic and Kinetic Control to Predict the Affect of Reaction Conditions and Pathways upon Chemical Reactions.
- Students Will Utilize the Relationship Between Equilibria, Electrochemical, and Thermodynamic Data to Predict Reaction Spontaneity.
- Students Will Distinguish Between Various Acid/Base Theories and be Able to Apply Them to Equilibria Systems.
- Students Will Predict the Physical Properties of Solutions, Understanding their Source and Relevance.
- Students Will Distinguish Between Chemical and Nuclear Processes.
- Students Will Demonstrate Knowledge of Introductory Vocabulary and Concepts of Organic Chemistry.
- Students will Demonstrate Proficiency in Fundamental Lab Techniques.

## **Blackboard:**

All important information regarding this course can be found in your Blackboard course. This web page can be accessed by going into your atlas account. For any technical support call the **Online Courses Help Desk at 407-582-5600**

Problem sets, handouts if any, and announcements will be posted on Blackboard course and it is your responsibility to check it regularly.

## **E-mail:**

I will regularly send email to your Blackboard e-mail address. It is your responsibility to check it regularly (daily).

## **Assignments:**

Assignments must be submitted prior to the due date in the assignment drop area in the Blackboard course, but will NOT be accepted late. A grading rubric will be given in the Blackboard course with the assignment. The assignments given are for you to assess your understanding of the material. If permitted, it is encouraged that you work on these assignments in groups but submitted individually. You cannot submit a group work for the final assignment. It must be your original work. Chemistry is best learned through working problems. So you must practice the end of the chapter problems in your textbook, practice questions and other work assigned to you by the instructor.

## **Discussions:**

There are two discussion topics in this course. Discussions allow you to the opportunity to express your position on topics in science that impact our society. Participation in the course discussion is required.

In each module, you will respond to questions about different topics involving chemistry. In addition to providing your answer to the discussion questions you are required to respond to your classmates' discussion posts. Your post as well as your response to classmates' posts will be made through the Blackboard Discussion tool. See the Discussion Rubric for more information.

Please do not "COPY AND PASTE" articles or references you read related to the discussion topic. You will NOT receive credit for this. You must write the postings in your own words with proper citations. Otherwise, you are plagiarizing.

## **Quizzes & Exams:**

Unannounced quizzes will be given during lecture or lab times. The quizzes will be available online in the Blackboard course. These graded quizzes will be out of 5 points each. There will be five chapter exams. All the chapter exams will be given at the Lake

Nona Testing Center. The exams will be available for one week at the Testing Center. Any missed exam cannot be made up if you are late, leave early or absent when the exam is available at the testing center exam (for unexcused absence). The quizzes and exams are timed.

No textbooks or any notes will be allowed during the exams and any exam or quizzes taken in the class. A copy of the Periodic Table will be provided to you for all exams.

The duration for quizzes administered online will be 40 minutes. The exams will be 120 minutes each. The dates for all the exams are given in the schedule given in the syllabus.

The chapters covered for each exam is given in the schedule in the syllabus.

### **Missed Exam:**

You may have ONE opportunity to take a missed exam to be used in case of emergency. It is your responsibility to contact me if you must miss an exam. This should be done via email as soon as possible but no later than the next lecture. Missing an exam must be a result of an *excused* absence and it must be accompanied by appropriate documentation. Failure to provide documentation results in an unexcused missed exam and a grade of zero will be assigned for that exam. Make-up exam must be completed within a week of the scheduled exam. NO make up exams will be given for the Final exam or any quiz given in the class.

### **Re-grade:**

If you feel that an assignment, quiz, or exam was graded incorrectly, you may request a re-grade. All re-grade requests must be submitted **within a week** of receiving your graded assignment, quiz, or exam in Blackboard grade book . To submit for a re-grade, please attach a written request detailing what you feel was graded improperly. No re-grade request will be accepted after the week period. I reserve the right to re-grade the entire assignment, quiz, or exam. In addition, grades will be posted on Blackboard and will serve as the official grade report.

### **Attendance:**

Though attendance is not directly part of your grade, attending lecture is an integral part of learning. Concepts not covered in the textbook may be discussed which you are still responsible for learning. If you do not plan on attending lecture, please drop the course. If you wish to withdraw from the class, it is your responsibility to submit the necessary forms in a timely fashion or a failing grade will result. Students reporting to class late or leaving early may be considered absent depending on when/if attendance is taken. You are responsible for the completion of all work assigned in class whether present or not. In case of absence, it is your responsibility to check the schedule of work in the Syllabus in the Blackboard course first. You can contact me if you have any questions. I will initiate an "Instructor withdrawal" if you are absent for more than three classes. **If you miss more than two labs you will automatically receive an "F" grade.**

**YOU MUST ARRIVE ON TIME FOR BOTH THE LECTURE AND THE LAB. IF YOU ARRIVE MORE THAN 10 MINUTES LATE FOR THE LAB, YOU WILL NOT BE ALLOWED TO TAKE THE LAB QUIZ AND WILL NOT BE ALLOWED TO DO THE EXPERIMENT WITH YOUR GROUP. YOU WILL BE DOING THE EXPERIMENT INDIVIDUALLY. NO EXTRA TIME WILL BE GIVEN TO COMPLETE THE EXPERIMENT ALSO 10 POINTS WILL BE DEDUCTED FROM YOUR LAB POINTS FOR EACH TIME YOU ARRIVE LATE TO THE LAB. YOU ARE NOT SUPPOSED TO LEAVE THE CLASSROOM WHILE THE LECTURE IS IN PROGRESS, UNLESS YOU ARE GIVEN A BREAK TIME BY THE INSTRUCTOR. IF YOU HAVE AN EMERGENCY, YOU MUST LET YOUR INSTRUCTOR KNOW ABOUT THIS BEFORE YOU LEAVE THE CLASSROOM.**

**Chemistry Laboratory:** Lake Nona Campus Room # 350

**NO MAKE LABS ARE ALLOWED. If absent for a lab you will score zero points for the lab.**

### **Description:**

As this is a combined lecture and laboratory course, a portion of the scheduled time will be spent in the laboratory, LNC Room # 350. The lab will offer an introduction to quantitative techniques and the chemical laboratory as well as reinforce concepts discussed in lecture. The lab experiments are design to develop scientific inquiry, technical skills, experience using scientific instrumentation, problem solving skills, and improve scientific writing skills.

### **Attire:**

Safety is of utmost importance when working in the lab. Therefore the following will be strictly enforced:

- **You may purchase your own safety goggles or it will be given to you in the lab if you do not have one. They must be worn at all times in the lab!**
- **Students should wear long pants.**
- **Closed-toe shoes are required; this means no flip-flops or Ballet shoes**
- **Absolutely no food or drink is allowed in the lab.**

Lab aprons are available to protect clothing, but may be limited. In addition, it is suggested that long hair be pulled back and restrained and jewelry and bracelets be removed when in lab. Students who do not comply with the attire requirements will not be allowed in lab and a grade of zero will be assigned for that experiment.

### **Pre-Lab Quiz:**

Part of lab safety involves being informed. This requires reading the lab in advance and having a general idea of the experiment and procedures. Therefore, the labs require a pre-lab quiz.

## Notebook:

A laboratory notebook is vital for documenting data and observations of a scientific experiment. The notebook should contain carbon copy pages, which are submitted to the instructor once the experiment is completed; prior to leaving for the day. The criterion for the notebook is that, should be thorough and organized so that any person who reads the notebook should fully understand the experiment. The following format should be used:

- All entries must be in non-erasable ink. If an error is made, cross it out with a single line, and continue as needed. Do not use pencil. Use an ink pen.
- All the pages in the notebook should be pre-numbered. If it is not, number all the pages in ink on the bottom right corner. This means pages should not be removed.
- The first page should contain the "Table of Content". The Table of Content should contain the name of the experiment, date of experiment, and page number.
- Start new experiments on a fresh page (i.e., do not start half way down a page following the previous experiment).
- Have the instructor initial the last page of each experiment prior to leaving. This also assures that you turn in the carbon copy before leaving.

Before coming to the lab the notebook should be set up with the following:

- Enter Lab in Table of Contents
- Title of Lab
- Purpose of Lab
- Brief outline of procedures, leaving adequate space for data and observations. A data table for any repetitive measurements to be taken that day. (Note: all data must be taken in the lab notebook, not in the lab manual, not on napkins, not on weigh paper, and not on the palm of your hand!)
- During the course of the lab each student will record: Observations of the characteristics of all reagents and products. Masses or volumes of any reagents used. Observations of any changes that may occur during the experiment. Any other information that may be relevant to the procedure. These will be checked at the beginning of the lab and will be part of the overall notebook score.
- NOTE: MSDS sheets are available for all reagents used in the lab upon request. MSDS sheets are also available online.

## Lab Reports:

All experiment will require a lab report. The lab report must have the completed data table, calculations, graphs and/or other questions that has to be answered for the experiment in the lab manual. Late reports, within valid reason, will be accepted up to one day after the due date with 5 points deducted. Any graphs should be **computer generated** with proper titles and axis labels. If you submit the Lab reports in the Blackboard course, your submitted file must be a word doc., docx., or rtf. or pdf file.

## Grading:

Your grades consist of assignments, quizzes, lab reports, four exams and a cumulative final exam, lab practical exam. **If you miss more than two labs you will automatically receive an “F” graded.**

**FORMAT: Your grade will be based on several components including:**

<b>Work done</b>	<b>Number of items</b>	<b>Maximum Points</b>
Lecture Exams (Lowest scored exam will be dropped)	5 @ 100 pts each	400
Lab Quizzes	6 @ 5pts each	30
Discussions	2 @ 25 pts	50
Laboratory Reports	6 @ 20 pts each	120
Chapter Quizzes	10@ 5 pts each	50
<b>Total Possible Points</b>		<b>650</b>

I reserve the right to lower these point minimum, however they will not be raised.

<b>Grade</b>	<b>Points Earned</b>
<b>A</b>	585 to 650
<b>B</b>	520 to 585
<b>C</b>	455 to 519
<b>D</b>	390 to 454
<b>F</b>	0 to 389

## Disclaimer:

Change in syllabus and/or schedule may be made at any time during the semester by announcement of the professor. A revised syllabus may be issued or posted in Blackboard course at the discretion of the professor.

## **Students with Disabilities:**

Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities.

## **Academic Honesty:**

All forms of academic dishonesty are prohibited at Valencia College. Academic dishonesty includes, but is not limited to, acts or attempted acts of plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, facilitating academic dishonesty, and misuse of identification with intent to defraud or deceive.

All work submitted by students is expected to be the result of the students' individual thoughts, research, and self-expression. Whenever a student uses ideas, wording, or organization from another source, the source shall be appropriately acknowledged.

Students shall take special notice that the assignment of course grades is the responsibility of the students' individual professor.

Academic penalties for dishonesty may include, without limitation, one or more of the following: loss of credit for an assignment, examination, or project; withdrawal from course; a reduction in the course grade; or a grade of "F" in the course. Disciplinary penalties for academic dishonesty may include, without limitation, warning, probation, suspension and/or expulsion from the College. Anyone observing an act of academic dishonesty may refer the matter to the professor, as an academic violation, and/or to the Dean of Students or designee, as a violation of the Student Code of Conduct.

## **Classroom Policies:**

Students who engage in any prohibited or unlawful acts that result in disruption of a class may be directed by the faculty member to leave the class for the remainder of the class period. Longer suspensions from class or dismissal on disciplinary grounds must be preceded by a disciplinary conference or hearing, as set forth in the Implementing Procedures of this Code.

Examples of such disruptive or distracting activities include, but are not limited to, the following:

- Activities that are inconsistent with commonly acceptable classroom behavior and which are not conducive to the learning experience, such as: excessive tardiness, leaving and returning during class, and early departure when not previously authorized;
- Activities which violate previously prescribed classroom guidelines or constitute an unreasonable interruption of the learning process;



- Side discussions which are irrelevant to the subject matter of the class, that distract from the learning process, or impede, hinder, or inhibit the ability of the students to obtain the full benefit of the educational presentation;

### **Student Grievance:**

Students have recourse through the Student Academic Dispute Resolution process to seek a fair determination for the assignment of a final course grade. However, final grades of "W" and "I" based upon the failure of the student to take the final examination, excessive absences, or other administrative reasons may not be grieved to the Student Final Grade Dispute Resolution Committee. For non-final grades and matters, each Campus President shall be responsible for designating a person or persons to assist students who wish a review of decisions that are related to access to courses and credit granted toward the degree (excluding final grades).

### **Attendance/Withdrawal Policy:**

Students are expected to attend all classes for which they are registered and are responsible for familiarizing themselves with the instructor's specific attendance policy as stated in the course syllabus. It is the student's responsibility to communicate with his or her professor regarding any absences. Failure to do so in a timely manner may put the student at risk of academic penalty as indicated in the attendance policy on the professor's syllabus.

A student who withdraws from class before the withdrawal deadline will receive a grade of "W". A student is not permitted to withdraw after the withdrawal deadline. A faculty member MAY withdraw a student up to the beginning of the final exam period for violation of the class attendance policy in which case the student will receive a grade of "W". Do not rely on the instructor withdrawing you if you stop attending, although he/she retains the right to do so **once you have missed 2 classes**. Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of "F".

### **General Policies:**

First and foremost, plan to **BE HERE**. Plan on being in the laboratory for the WHOLE time. Chemistry requires active learning. You must practice and discuss the concepts and work problems to better understand it. I encourage you to study together as well as work on problems at the end of the chapter together. If you do not understand a particular concept, please come see me.

You ARE expected to keep up with homework assignments on your own. You WILL be tested over the material taught in this course. Expect to spend several hours each week outside of class on chemistry. Develop a regular study schedule which will help you maintain good study habits. Most importantly, get help immediately when you are having difficulty. Concepts will compound and procrastinating will make it more difficult for you and me (when you do come in for help).

Please turn off your cell phone or beepers during lecture. It is disrespectful to me and your classmates to disrupt class. If you are expecting an important call, please let the instructor know, you can set it on vibrate and leave the room to accept the call to minimize the disruption. If you are found using the cell phone or any electronic devices in classroom or the laboratory, you may not be allowed to continue to attend the class. If you are using a laptop or ipad or cell phone to check your Blackboard course, you must let the instructor know about this in advance and get the instructor permission to use your personal devices in the classroom.

Earning a good grade is completely up to you and the amount of time and effort you're willing to put into the class **throughout** the term. You know going in how many points you need to earn your grade. **There will not be extra credit assignments to pull you through.** Grades are not given simply to keep up a GPA or keep a scholarship. Any passing grade must be **earned** by you.

### Tentative Lecture Schedule CHM 1046 Summer 2013

Start Date	Chapter #/Exam/Quiz	Topics	Due date
06/18	Chapters 11,12	Introduction, Review of Syllabus, States of Matter; Liquids and Solids, Solutions	
06/20	Chapters 12, 13	Solutions, Rates of Reactions	
06/20	Online Quizzes	Chapters 11,12	07/29
06/21	Exam 1	Chapters 11,12	06/28
06/25	Chapters 13,14	Rates of Reactions, Chemical Equilibrium	
06/27	Chapter 14	Chemical Equilibrium	
07/02	Chapters 15,16	Acids and Bases, Acid-Base Equilibria	
06/21	Online Quizzes	Chapters 13,14	07/29
06/28	Exam 2	Chapters 13,14	07/05
07/04	Discussion	Discussion 1	07/12
07/09	Chapters 16,17	Acid-Base Equilibria, Solubility and Complex - Ion Equilibria	
07/02	Online Quizzes	Chapters 15,16	07/29
07/12	Exam 3	Chapters 15,16	07/19
07/11	Chapter 17	Solubility and Complex -Ion Equilibria	
07/16	Chapters 18,19	Thermodynamics and Equilibrium, Electrochemistry	
07/18	Chapter 19	Electrochemistry	
07/18	Discussion	Discussion 2	07/26
07/11	Online Quizzes	Chapters 17,18	07/29
07/19	Exam 4	Chapters 17,18	07/26
07/23	Chapters 20, 23	Nuclear Chemistry, Organic Chemistry	
07/25	Chapter 23	Organic Chemistry	
07/09	Online Quizzes	Chapters 19, 20	07/29
07/29	Exam 5	Chapters 19, 20 and 23	07/30

### Tentative Laboratory Schedule CHM 1046 Summer 2013

<b>Expt. and Lab Quiz Date</b>	<b>Experiment Name</b>	<b>Items Due</b>	<b>Lab report sheet due date</b>
06/20	Student Lab Safety Training and Discussion of Lab Report Guidelines	Signed Lab Safety Agreement	06/27
06/27	<b>Experiment #1:</b> Unknown Determination of a Pure Liquid by a Micro-Boiling Point	Pre lab quiz 1	06/27
06/27	<b>Experiment #2:</b> Determination of the Molar Mass of a Solute by Freezing – Point Depression	Pre lab quiz 2	06/27
07/11	<b>Experiment #3A:</b> The Factors Affecting the Rate of a Reaction and Determination of the Rate Law	Pre lab quiz 3  Lab report sheet experiment #1 and 2	07/11
07/18	<b>Experiment #5:</b> Le Chatelier's Principle of Reaction Equilibrium for Complex – Ion Systems	Pre lab quiz 4  Lab report sheet experiment #3A	07/18
07/25	<b>Experiment #6:</b> The Relative Strength of Acids; An Introduction to Acidity and pH <b>Experiment #8:</b> Determination of an Unknown Aqueous Salt by pH and Analysis of Buffers	Pre lab quiz 5 and 6  Lab report sheet experiment #5	07/25
07/30	No Lab	Lab report sheet experiment # 5 and 6	07/30