

# CHEMISTRY 1050 Course Syllabus, Spring Semester 2014

## Prerequisite: Basic algebra

Please read this entire syllabus and pay attention to the details. You need to hand in a signed copy of statement of understanding of the content of this syllabus.

A complete version of this syllabus is available at: [chemistry.gsu.edu](http://chemistry.gsu.edu)  
Click on **current students** (left column), click on **current syllabi**, click on **Chem 1050**.

**Lecture:** MWF 9:00-9:50 a.m., Room 200 Langdale

**Textbook:** "Basic Chemistry", 4th Edition by Timberlake & Timberlake, Prentice Hall.

**Instructor:** Dr. C-N Ho                      **Office:** 234 Kell                      **E-mail Address:** cho@gsu.edu

**Office Hours:** W 12:00-1.00 pm and by appointment

**Telephone:** 404-413-5889

**Exam schedule:** (Quizzes are given unannounced)

Exam 1 (1, 2, 3, 4),	1/31, Friday;	Exam 2 (4, 5, 6, 7),	2/21, Friday;
Exam 3 (7, 8, 9, 10),	3/14, Friday;	Exam 4 (10, 11, 12, 13, 14),	4/18, Friday
Final	American Chemical Society (ACS) comprehensive standardized test 5/5 Monday, 9.00-9.50 am		

**Tentative Course Points:** Course points are calculated as follows:

Best 4 of exams and-quizzes total	400 points
Final exam (comprehensive)	100 points
Total	500 points

Assignment of letter grades from point scores:

A+ > 475 (>95%)	A 450-474 90-94.8%	A- 435-449 87-89.8%	B+ 420-434 84-86.8%	B 395-419 80-83.8%	B- 380-394 76-79.8%)
C+ 360-379 (72-75.8%)	C 330-359 66.0-71.8%	C- 300-329 60.0-65.8%	D 260-299 52-59.2%	F < 260 <52%)	

**Electronic Calculators:** Use of programmable calculators **IS NOT ALLOWED** in this course. Students will need a non-programmable scientific calculator (<\$10.00) to use during quizzes and exams. A scientific calculator with logarithm, exponent, and memory capabilities is recommended.

**CELL/SMART-PHONE CALCULATORS ARE ALSO NOT ALLOWED**

### Assignments, Exams, and Quizzes:

Students need to write down their GSU Panther I.D. card number when taking exams and quizzes. The instructor reserves the right to assign seating during exams and quizzes.

**Cell-phones** need to be kept either in purses or book-bags during exams or quizzes; of course, they should be turned off at all times.

There are four (4) 100-point exams. In addition, **unannounced** quizzes with a maximum of 100 points, and which will be counted as one exam will be given. The sum total of quizzes will count as one "exam". The lowest score of these 5 exam-quiz combination will be dropped. If the **TOTAL** of the quizzes is lower than all the other 4 exams, the **TOTAL** quiz score will be dropped. If a student misses 2 regular exams, the total of the quizzes will be kept to replace one of the missed exams.

## **NO MAKE-UP EXAM OR QUIZ WILL BE GIVEN**

In all exams and quizzes, considerable credit may be given for correct set-up of numerical problems. However, numerical answers should be expressed with proper units and significant figures are expected for full credit. Missing an exam or a quiz will result in the assignment of a zero, regardless of the reason for absence. Students are responsible for keeping all quizzes, tests and other papers returned to them until after the course has ended.

**THE FINAL EXAM MAY BE A TIMED STANDARDIZED AMERICAN CHEMICAL SOCIETY COMPREHENSIVE EXAM, AND WILL COUNT AS 1/5 OF THE TOTAL LECTURE GRADE.**

### Communicating with instructor:

If you need to communicate with me by e-mail, please make sure to include the following:

1. a subject line,
- 2 identify yourself with full name, and that
- 3 you are a Chemistry 1050 student.
- 4. Please use your GSU email address**

**Failure to do so will result in the loss of your message. I had been instructed to avoid opening an unknown email.**

### **Class Attendance:**

Students are expected to attend all lecture classes.

Students are required to take all quizzes, lecture exams, and the course final exam which cannot be dropped. Sometime after the mid-point of each course (an exact date will be set by the Provost or his designee), the University now requires faculty members to:

- 1) Give an F to any student who is on the course roll but no longer attending class and
- 2) Report the last day the student attended class or turned in an assignment.

Students who withdraw from the course themselves by the mid-point of the course will receive a W under this policy.

Students who are withdrawn by the University for nonpayment and other reasons may petition the Departmental Chair for reinstatement into their class.

### **Cancellation of Classes:**

Official closure of the university is determined by the university administrators. This sometime occurs due to inclement weather. Notification of closure is by broadcast on local radio and television stations. Should closure results in cancellation of chemistry class or examination periods, resumption of the missed activities would occur at the next regular class period when the university reopens or as determined by the course instructor.

Should a professor is unable to meet the class for reasons other than the one noted above, another professor would normally meet the class as scheduled. However, on rare occasions, conditions could require cancellation of class or examination periods. In such cases, there would be official notification of cancellation made to all affected students. Should notification be made through posted notices in the classroom or via other means, the students have the final responsibility to confirm the authenticity of the cancellation by calling the Chemistry Department office: 404-413-5500.

## **CHECK YOUR GSU e-mail FOR IMPORTANT MESSAGES!**

### **GSU Policy Regarding Student Conduct and Integrity:**

See section 4909 in [http://www2.gsu.edu / ~wwwfhb/fhb.html](http://www2.gsu.edu/~wwwfhb/fhb.html)

The Georgia State University Policy on Academic Honesty is in force in this course, including, but, not necessarily limited to, infractions in the areas of Plagiarism, Cheating on Examinations, Unauthorized Collaboration, Falsification, and Multiple Submissions. The university's policy is published in the, On Campus: The Student Handbook, available to all members of the university community. Therefore, all tests taken must represent your individual unaided efforts. To receive or offer information during an examination is cheating. The use of unauthorized supplementary materials during tests is also cheating. Conduct or actions that disrupt class or test periods or falsification of information related to chemistry courses by any student will be taken as violation of the policies of the Board of Regents of the University System of Georgia and the GSU Student Code of Conduct, Section 6.0. Any suspected offenses may be referred to the Department Chair or the Dean of Students for appropriate disciplinary action.

# STUDY GUIDE FOR CITIZEN CHEMISTRY

## OBJECTIVES OF THE COURSE

TO LEARN SOME OF THE BASIC PRINCIPLES OF CHEMICAL SCIENCE AND TO UNDERSTAND HOW CHEMISTRY WORKS AND ITS IMPORTANCE IN CITIZENSHIP

Chemistry is involved with so many things and events one encounters in daily life that it is unwarranted ignorance and a poor citizenship, if one does not know how they come about. Much chemistry is behind many things one uses and comes across every day. Items such as cosmetics and fragrances, food preservatives and diets, plastics, petroleum, coal, pesticides and pollution, medicine, drugs, herbs, diseases, virus, and AIDS, all have intriguing chemistry behind them. Above all, any living organism is essentially an intricate chemical system in which the fundamental units, the cells, sustain and reproduce themselves by being the most efficient and brilliant chemists the universe has ever known. This course will give you the background to begin to learn the principles of chemistry and to help you to have a working understanding of the many things happening around us and within us. In addition, many of these chemical events, substances and their applications have profound effects on our well-being. Thus we would like to know the chemistry behind these things and to become a better informed users and consumers of resources and products of chemical innovations.

## SCIENTIFIC DEFINITIONS, TERMS, STATEMENTS, AND LAWS

Just like any new subject, one has to learn the "jargons" for that field. In chemistry as in any sciences, names, terms, and words that are used daily are more precisely and strictly defined or stated so that ABSOLUTELY NO AMBIGUITY exists. There are many new words you need to know the exact meaning of and you will be asked to state their definitions ACCURATELY, in many instances, IT IS BEST to write them VERBATIM, EXACTLY THE WAY THE BOOK OR INSTRUCTOR STATES THEM.

## MATH AND CALCULATIONS

One cannot live in this world without the ability to do simple arithmetic and to translate problems into quantitative terms. Musicians need to know how to count the duration of notes they have to execute. Business people always need to know their market through surveys, objective statistical analysis, cost and performance analysis, and always talk of bottom line. We dilute pesticides to its proper strength, make baby formulas according to age and weight of babies, and take prescription drugs of correct dosage to have optimum effectiveness without serious side effects. Even the golfers, they need to know how to deal with negative numbers! For all these activities we must be able to understand simple mathematics and the ability to apply them to solve simple problems. Even as simple as knowing if a sale item in a store is really a good buy compared to the same item at a regular price in another store requires math savvy. In fact in this tough economic time, understanding finance and knowing how to do math (PARTICULARLY STUDENT LOAN) mean less stress and better quality of life.

As a physical science, experimentation and measurements are the backbone of understanding chemistry, one cannot avoid doing math. In this course calculations and problem-solving will be required.

**You will do lots of them!** These calculations are no different from those done in business, or as intelligent consumers. The only thing new is how to interpret the chemical problems and transcribe them into mathematical problems and use arithmetic and algebra to obtain answers.

## ATTENDING LECTURES

Many questions on exams require a thought process which is shown through give-and-take discussion that can only be done in class. Many hints, pointers, and emphases are usually given during lectures. Many research studies concluded that poor attendance adversely affected the letter grade that an average student received. One misses a great deal of important and useful information for not attending lectures.

## HOME WORK AND PROBLEM-SOLVING

IT IS IMPOSSIBLE TO OVER STRESS THE IMPORTANCE OF FAITHFULLY COMPLETING AS MANY WITHIN AND END-OF-CHAPTER PROBLEMS. ONE CANNOT LEARN SCIENCE WITHOUT WORKING ON THE PROBLEMS.

These problems may not be identical to some exam questions you will encounter, but the process of doing them and realizing you do not understand certain topics will help you know and remember the materials better. You will find that solving the problems and having to think through the contents help in a subtle but sure way.

Do **ALL** the in-chapter "concept check", "sample problem", and end-of-chapter "key terms", "understanding the concepts", and as many of the problems as one can. Read Section 1.3 page 11-13 on some strategies to study chemistry effectively. Also be sure to look at every "**concept map**" given at the end of each chapter.

## POINTERS ON HOW TO DO JUST FINE IN CHEMISTRY

It is important to realize at the very beginning that science builds upon previous knowledge and basic principles. It is extremely important that one understands the subject matter **RIGHT FROM THE START**. It is **easier** and better to expend some effort to know the subject matter each step of the way. **IF ONE FALLS BEHIND, IT TAKES A MUCH GREATER EFFORT TO CATCH UP BECAUSE EVERY LATER TOPICS RELY ON PRINCIPLES AND FACTS OF PREVIOUS TOPICS, WHICH CAN PILE UP EXTREMELY RAPIDLY AND BECOME OVERWHELMINGLY DIFFICULT.**

Always read ahead before the lecture, even if you do not understand a thing being read. Just read through the material to get an exposure so that it will seem familiar when the material is lectured upon in the class. Read the text again immediately that evening to have the concept sink in while it is still fresh in your memory. It is impossible to cram in a science course. Studying 12 hours over the weekend is a great deal less effective than studying the subject 2 hours daily. Cramming before the exam tends to cause greater confusion as there is so much material to know and remember. This situation often leads to panic at exam time. **When one panics, the mind blanks out. THIS IS THE SUREST WAY & AN ABSOLUTE GURANTEE TO FAIL THE EXAM.**

**BE SURE TO READ THE TEXT BOOK FAITHFULLY. YOU NEED BOTH THE LECTURE NOTES AND THE TEXT TO DO WELL. TIME IS LIMITED, THE INSTRUCTOR CANNOT LECTURE AND EXPLAIN EVERYTHING IN THE BOOK IN CLASS. THE STUDENT WILL BE HELD RESPONSIBLE FOR ALL THE MATERIAL IN THE ASSIGNED CHAPTERS.**

## CHEMSITRY 1050, FALL 2013 STATEMENT OF UNDERSTANDING (student copy)

I have read the entire syllabus, and have completely understood the grading system and all policies and pertinent information on this course provided in it. Furthermore I also have read and understood the summarized information given below:

1. The course syllabus provides a general plan for the course. We will attempt to cover chapters 1-16. However, deviations may be necessary and sections of some chapters may be omitted and not covered or tested. Thus some chapters may be covered only partially. Chapters 17 and 18 will not be covered in this course.
2. Please note the exam dates and that the final is a **COMPREHENSIVE STANDARDIZE TEST**. Also quizzes are given **unannounced**.
3. **No make-up exams or quizzes will be given.** If a student misses an exam or a quiz, the score for the given exam/quiz is zero. If an exam is missed, that exam will be considered the lowest score one and will be dropped.
4. Students need to write down their GSU Panther ID card numbers when taking the exams and quizzes.
5. The instructor reserves the right to assign seating during exams and quizzes.
6. Use of cell- or smart-phone and programmable calculators is not allowed on exams or quizzes. **Please remember to bring your scientific calculator to every class lecture!**
7. During class lecture and exams/quizzes, cell- and smart-phones need to be kept in purses or book bags/packs and be turned off.
8. **PLEASE, NO TALKING OR LOOKING AROUND DURING EXAMS AND QUIZZES! REPEAT OFFENDERS WILL HAVE THAT SPECIFIC EXAM/QUIZ FORFETED.**
9. Hats, hoods, and jackets must be put away during exams/quizzes

**FINAL GRADES WILL BE AVAILABLE ONLY THROUGH GOSOLAR**

Name (print in ink): \_\_\_\_\_ Panther ID: \_\_\_\_\_

Signature (in ink): \_\_\_\_\_ Date: \_\_\_\_\_

## CHEMSITRY 1050, FALL 2013 STATEMENT OF UNDERSTANDING (instructor copy)

I have read the entire syllabus, and have completely understood the grading system and all policies and pertinent information on this course provided in it. Furthermore I also have read and understood the summarized information given below:

1. The course syllabus provides a general plan for the course. We will attempt to cover chapters 1-16. However, deviations may be necessary and sections of some chapters may be omitted and not covered or tested. Thus some chapters may be covered only partially. Chapters 17 and 18 will not be covered in this course.
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Signature (in ink): \_\_\_\_\_ Date: \_\_\_\_\_