

UNIVERSITY OF KENTUCKY
Department of Chemistry

SYLLABUS

GENERAL COLLEGE CHEMISTRY I

CHE 105-001

MWF 11:00 - 11:50 AM CP-139

Spring 2007

Textbook: Raymond Chang, *Chemistry, 9th Edition*, McGraw-Hill Publishing, 2006.

Recommended Supplement: Chemistry CD-ROM, Thinkwell Publishing.

Instructor: Dr. Stephen M. Holmes

Office: CP-15

DATES	CHAPTER	TOPICS	SUGGESTED HOMEWORK FROM TEXTBOOK
Jan. 10, 12, 17	CH 1	Syllabus; Chemistry: The Study of Change	2, 3, 5-10, 12, 16, 21-26, 30, 32-34, 36, 38-40, 42-50 (even), 62, 65, 69, 70, 86, 89
Jan. 19, 22, 24, 26	CH 2	Atoms, Molecules and Ions	5, 7, 8, 14-18 (even), 22, 24, 26, 27, 28, 30-36, 40, 44-48 (even), 57-60, 64, 66, 68, 69, 74, 90, 99 (if you like puzzles)
Jan. 29, 31, Feb. 2, 5	CH 3	Mass Relationships in Chemical Reactions	2, 5-8, 9, 11, 12-22 (even), 23, 24-30 (even), 35, 39, 40, 43, 44-54 (even), 59, 60, 63, 64-68 (even), 69, 74, 78, 81, 82-86 (even), 90, 92, 96, 102, 104, 111
Feb. 7		*Optional Review	
Feb. 8	CH 1, 2, 3	EXAM I (8:00-9:15 PM)	
Feb. 9, 12, 14, 16	CH 4	Reactions in Aqueous Solutions	1, 6, 7-10, 17-19, 20-24 (even), 26, 29, 31, 32, 33, 40, 43, 44, 46, 48-50, 60-66 (even), 70-73, 77, 78, 79, 83, 85-88, 92, 96, 104, 107, 130
Feb. 19, 21, 23	CH 5	Gases	13, 14, 16-20, 22-26 (even), 31-34, 36-50 (even), 52-54, 58, 64-70 (even), 78, 86, 92, 106, 107, 132, 139, 148
Feb. 26, 28, Mar. 2, 5	CH 6	Thermochemistry	1, 3, 7, 11, 14-16, 18, 20, 21, 25-28, 30, 33-38, 41, 45, 48, 51-54, 56, 61-65, 72, 78, 82, 88, 95, 100, 116
Mar. 7		*Optional Review	
Mar. 8	CH 4, 5, 6	EXAM II (8:00-9:15 PM)	

Mar. 9, 19, 21, 23	CH 7	Quantum Theory and the Electronic Structure of Atoms	1, 7-12, 15, 16-20 (even), 23, 29, 30-34 (even), 35, 39, 40, 42-44, 48, 52, 55, 56-66 (even), 67, 75-78, 88-92, 96, 106, 109, 120, 124, 132
Mar. 26, 28, 30, Apr. 2	CH 8	Periodic Relationships Among the Elements	5, 12, 13, 15, 21, 22, 25-28, 30, 32, 38-42 (even), 43-46, 48, 49, 52, 55-59, 61, 64, 68, 74, 78, 90, 102, 118, 121, 128
Apr. 4, 6, 9	CH 9.1 - 9.6	Chemical Bonding I: Basic Concepts	4, 5, 7, 15, 18, 23, 25, 26, 35-38, 40, 44-48
Apr. 11		*Optional Review	
Apr. 12	CH 7, 8, 9.1 - 9.6	EXAM III (8:00-9:15 PM)	
Apr. 13, 16	CH 9.7 - 9.9	Chemical Bonding I: Basic Concepts (Continued)	51, 52, 54, 55, 64-66, 69-72, 80, 88, 92, 96, 104
Apr. 18, 20, 23, 25, 27	CH 10	Chemical Bonding II: Molecular Geometry and Hybridization of Atomic Orbitals	7, 8-14 (even), 15, 19, 22-25, 28, 33, 34-44 (even), 45, 49, 52, 57, 58, 68, 69, 76, 89, 90
May 1(Tues.)	CH 1 - 10	Final Exam (8:30 - 10:30 PM)	

105 TENTATIVE HOMEWORK DUE DATES

Introduction Assignment	Friday, Jan. 19	11:59 PM
Chapter 1	Friday, Jan. 26	11:59 PM
Chapter 2	Friday, Feb. 2	11:59 PM
Chapter 3	Friday, Feb. 9	11:59 PM
Chapter 4	Friday, Feb. 23	11:59 PM
Chapter 5	Friday, Mar. 2	11:59 PM
Chapter 6	Friday, Mar. 9	11:59 PM
Chapter 7	Friday, Mar. 30	11:59 PM
Chapter 8	Friday, Apr. 6	11:59 PM
Chapter 9	Friday, Apr. 20	11:59 PM
Chapter 10	Sunday, Apr. 29	11:59 PM

UNIVERSITY OF KENTUCKY
Department of Chemistry

CHE 105 GENERAL COLLEGE CHEMISTRY I (3)

COURSE DESCRIPTION:

A study of the principles of chemistry and their application to the more important elements and their compounds. Not open to students who have already completed both CHE 104 and 106 or CHE 104 and CHE 108, but is open to students who have completed just CHE 104. Prereq: Math ACTE of 23 or above or (Math placement test) or MA 109 or the community college course CHM 100 or CHM 102.

UNIVERSITY STUDIES PROGRAM:

This course is part of the University Studies Program, which is designed to provide a comprehensive liberal arts education to all undergraduates. The course can be taken together with CHE 107 and CHE 115 to fulfill the Natural Science requirement in University Studies.

PAGERS, CELLPHONES AND ANY OTHER FORM OF ELECTRONIC COMMUNICATION DEVICE MUST BE TURNED OFF DURING CLASS AND ARE PROHIBITED DURING EXAMS.

IMPORTANT DATES

Last day to add any course - 17 January.

Last day to drop a course without its appearing on your transcript - 31 January. This is also the last day to change the grading option (letter grade to pass/fail or vice versa; credit to audit or vice versa).

Last day to withdraw from a course - 9 March.

Academic Holiday - 15 January.

Academic Holidays (Spring Break) - 12-17 March.

MAJOR RELIGIOUS HOLIDAYS

Students are responsible for notifying the General Chemistry secretary, Ms. Geri Gerke (CP-125) **in writing** of anticipated absences due to their observance of such holidays. Notification must be received no later than the last day for adding a class (17 January).

STUDENTS WITH DISABILITIES

Any student with a certified disability should provide this information to the General Chemistry secretary, Ms. Geri Gerke (CP-125) no later than the last day for adding a class (17 January).

INFORMATION CARD (FORM GC-1.1)

All students shall complete and return to the instructor the information card provided. This satisfies University Senate rules regarding intent to attend this course. Failure to submit this card within the first two class periods shall be cause for removal from the class roll.

EXAMINATIONS

Each examination will last 75 minutes. Instructions for each examination will be given at 7:55 PM on the day of the examination. Be on time; no student may leave prior to 8:20 PM and ***no student will be admitted after 8:20 PM***. If you show up after 8:20 PM, you will **NOT** be allowed to take the exam. See “Make-up Examinations” for details. You must bring an ID card (or other identification with a picture, preferably in color), one or more #2 pencils, and your own simple scientific calculator (with exponents and logarithms) to all examinations. Graphing calculators, calculators with large memory banks and calculators which permit the entering of alphabetic symbols are **NOT** permitted. No TI-80 series graphing calculator is permitted. The instructor has the final say as to what is acceptable. If you have questions, ask your instructor. All materials (backpacks, pagers, phones) must be left at the front of the room during the exam. Your seating assignment for the examinations will be posted in Blackboard 1-2 days prior to the examination. The file is located under “Course Information”, “Exam Information”. Please check carefully all exam dates and times for the semester and if you have any school-related conflicts with the dates and/or times, contact Ms. Geri Gerke (CP-125) at least two weeks before the first exam.

FINAL EXAMS

The final exam is Tuesday, 1 May from 8:30-10:30 PM. Contact Ms. Geri Gerke in CP-125 if you have a course conflict with this time. If you miss the final, if you are excused, and if you are in passing standing in the course you will receive an “I” for the course and you will make up the exam with the next semester’s final. If you are not in passing standing and if you miss the final exam, you will receive an “E” grade for the course.

GRADING IN THE COURSE

Three examinations (each of 75 minutes duration; 25 multiple-choice questions) and a Final Examination (of two hours duration, subdivided into four sections that correspond to the three examinations and the material following the third examination) will be given in this course. Grades for the course will be assigned on the following basis: A: 90.0 - 100; B: 80.0 - 89.9; C: 70.0 - 79.9; D: 60.0 - 69.9; E: below 59.9.

On the final examination, if the grade on that section corresponding to the examination with **THE LOWEST GRADE** is improved, that section grade will be substituted for the original examination grade.

The final grade for the course will be calculated as follows:

Three examinations, at 20% each	60%
Assigned Homework	15 %
Comprehensive Final Examination	<u>25%</u>
Total	100%

The department adheres rigorously to University policy with respect to awarding grades of I (incomplete) - see "Student Rights and Responsibilities," by going to <http://www.uky.edu/StudentAffairs/Code/>. Go to Part II: Rules of University Senate, Section V, 5.1.3.2.

EXTRA CREDIT OPPORTUNITIES

You will be given the opportunity to earn up to 10 “Bonus Points” throughout the semester. Each Bonus Point will add 0.1% to your final average. For example, if you earn 7 Bonus Points and your average at the end of the semester is 89.3, your new average will be 90.0 and you have an “A” for the semester. Bonus Points will be given for attending the General Chemistry Learning Center and as described by your individual instructor. You may not earn Bonus Points after the final examination.

MAKE-UP EXAMINATIONS

There will be no separate make-up examinations for the three examinations. However, for those students who miss one examination with a legitimate, documented excuse under the guidelines outlined on a separate sheet posted on the General Chemistry Bulletin Board (outside of CP-139) *AND WHO OBTAIN PERMISSION WITHIN THE TIME LIMIT INDICATED ON THE EXCUSED ABSENCE POLICY FORM POSTED*, the score on a section of the Final Examination pertaining to the material of the missed examination will be converted to a percentage and substituted for the score on the missed examination. *PLEASE CAREFULLY NOTE BOTH THE TIME REQUIREMENTS AND THE PROCEDURE FOR OBTAINING A LEGITIMATE EXCUSED ABSENCE*. Purchase of airline tickets is **NOT** considered a legitimate reason to be excused from an exam. Don't purchase tickets which conflict with exams. If an exam is missed and is not excused, a zero will be given. This score will be your **LOWEST** grade and will be replaced as described under "Grading in the Course."

CHEATING

The Department of Chemistry considers cheating a very serious offense and will do everything possible to prevent cheating.. Do not bring information into exams in any form; do not look at other student's exams during the test; do not turn in falsified documentation to obtain an excuse from missing an exam, assignment or class. The penalty for cheating is defined by the Senate rules and will range from a zero on the exam or assignment (without the option to replace the grade) to failing the course with a record that the failure was due to cheating. For the full procedure, see Senate rules 6.3.0 and following.

HELP!

The Department of Chemistry will offer **the week before** and **the week of** examinations a one-hour help session for students in CHE 105. Attendance at these help sessions is entirely voluntary. For the Spring 2007 semester these help sessions will be from 4:00 - 4:50 PM on Mondays in CP-139. In addition, the Chemistry Department provides a "General Chemistry Learning Center" that is staffed by CHE 115 teaching assistants. The learning center is located in CP-25. The schedule for the learning center is posted on the door to CP-25 and will be posted in Blackboard a few days after the beginning of classes.

You will also find several old examinations available by clicking on "External Links" in Blackboard.

PERSONAL TUTORS

Tutors for General Chemistry are available. A list of names of Department of Chemistry staff willing to tutor can be obtained from the receptionist in the Chemistry Office (CP-125) soon after the beginning of the semester.

COPYRIGHT

"All course material is copyrighted (either by the instructor or others). Therefore, transcribing and then selling, publishing or posting any of the lecture material presented in class is strictly prohibited. This applies particularly to 'professional' note-taking services and companies that publish such material on the Internet or in written form."

OFFICE HOURS

You are encouraged to make use of your instructor's office hours. Office hours for the CHE 105 instructors are as follows:

Instructors	Section	Phone/E-mail	Office Hours	Office
Dr. S. M. Holmes	001	Phone: 257-7073 E-mail: smholmes2@gmail.com	M 1:00 - 4:00 PM	CP-15
Dr. H. Ades	002	Phone: 257-1871 E-mail: phy200@uky.edu	M - F 12:30 - 1:45 PM	CP-23
Dr. F. J. Holler	401	Phone: 257-5884 E-mail: fjholler@gmail.uky.edu	TR 2:00 - 3:00 PM MW 4:30 - 5:30 PM	CP-209

You are also welcome to come to the office of the Director of General Chemistry (Dr. Kim Woodrum, CP-125, E-mail: kwood2@uky.edu) to discuss matters of policy or to make comments about the course. Dr. Woodrum is normally available Tuesdays and Thursdays by appointment only. You may make an appointment by calling the General Chemistry secretary (Ms. Geri Gerke) at 257-3882.

E-MAIL COMMUNICATION

When you e-mail faculty or staff regarding course issues, please include in the subject line of your e-mail the following: CHE 105 00Y Subject, where Y is your section number and Subject is a few words describing the topic of your e-mail. Also, be sure to include your name either in the From: field or in the body of your message. E-mails that do not include a proper subject line and your name may be returned without comment.

Blackboard and Homework Instructions

To access Blackboard, go to <http://myuk.uky.edu>. This site gives links for logging in, instructions, changing your password, help, etc.

If you used Blackboard at UK last semester, your account is still active and you will use the same user name and password as last semester. It is highly recommended that you go ahead and change your password, it expires every 90 days.

If you have not used Blackboard at UK, you should go to <https://elearning.uky.edu> and click on the "Accessing Blackboard" link. This will give you complete instructions on how to log in, be prepared to follow directions very carefully.

It is your responsibility to log in and not miss assignments. Ignorance or incompetence will not count as an excuse for missed assignments. Your first assignment is due Friday, January 19 @ 11:59 PM. Log in right away so any problems can be ironed out before your assignment is due.

Once on Blackboard, click on the course you wish to access in the box on the right of the screen. You will use Blackboard to access the following:

- I. **Announcements:** Current announcements will be displayed on the opening course screen. Be sure to log into Blackboard on a daily basis even if you do not have homework to do, so you can read announcements that the instructor, or Director of General Chemistry has posted for you.

- II. **Homework Assignments:** Assigned Homework will be completed on Blackboard. These assignments count as 15% of your grade.

Click on “Tools/WebAssign”, then “WebAssign link”.

Please note the following:

1. WebAssign is a separate website location that comes up in Blackboard. To ensure you know how to use WebAssign, **you need to read the Student Guide!** Disregard 1 and 2 of the guide. (They do not apply to you. You are already registered and logging into Blackboard will log you into WebAssign.) You must take responsibility to know how WebAssign works. The Student Guide, request for assistance and other important information are located at:
http://www.webassign.net/info/support/stu_support.html
2. If WebAssign is unable to help you with your issues, contact Dr. Kim Woodrum at kwood2@uky.edu. She will be able to help or direct you to where to get the help you need.
*Follow the protocol for e-mail communication listed above.
3. The lowest two assignments will be dropped. Therefore, two assignments are automatically excused through this drop policy for whatever reason, forgot to do it, missed due date, computer malfunction. A percentage score will be calculated for each of the 11 homework assignments. The two lowest percentages will be dropped, and the final homework score will be the average of the remaining percentages.
4. To receive an extension on an assignment, you will need to provide legitimate, documented excuses consistent with University policy in order to be granted the manual extension. The documentation must be turned in to Ms. Geri Gerke in the main chemistry office (CP-125) within one week of the homework due date. Extensions will not be granted if you view the key.
5. Additional issues that arise will be addressed in the Announcements in Blackboard. Be sure to check your announcement page daily.
6. Grades for homework as well as exams will be posted in WebAssign. Click on “Grades” at the top of the screen. Click “View All” to see all grades for the semester.

- III. **Course Information:** At this site you will find seating assignments for exams, keys for exams, lecture notes and other important information.

- IV. **Study Aids:** Extra resources for help with the topics of general chemistry.

- V. **External Links:** Important links will be posted here, including old exams and keys (make sure to read information for password to old exams).

Contact the UK InfoTech Customer Service Center for help with these or other matters related to Blackboard.

Online Blackboard Support Center is available to you to answer all kinds of Bb-related questions, 24 hours a day and seven days a week. This extra source of help offers web pages, real-time text chat, and a toll-free phone number. Take a few minutes to explore the full array of helpful information pages on this site. Users can learn about Bb features old and new and get help with a wide range of Bb-related issues.

Before logging into Bb, go to the 24/7 Bb Support Center at

<http://supportcenteronline.com/ics/support/default.asp?deptID=1083> (or us this abbreviated address:

<http://tinyurl.com/9qw5t>).

After logging in, the quickest way to access this Support Center is to click the Help icon (question mark) at the top of every Bb page, next to the Logout button.

The UK InfoTech CSC, located in 111 McVey Hall (Computing Center) is open for visits 7 AM to 6 PM, Monday through Friday. During these hours, you can also phone in (859-257-1300) to speak with a consultant. After hours, you can leave a phone message. You can send e-mail at any time to helpdesk@uky.edu. In your message, be sure to provide as many details as you can.

Any Bb user who has forgotten a password and needs it reset to the default should contact the CSC for assistance.

WebAssign Technical Support

Go to http://webassign.net/info/support/stu_support.html