

# **CHE 105 ONLINE: GENERAL COLLEGE CHEMISTRY I**

UNIVERSITY OF KENTUCKY

**Students must obtain a proctor for each exam: see details below**

Instructor:  
Semester: Summer 2013  
Course: CHE 105-229  
Prerequisites: Math ACT of 23 or above; or math placement test; or MA 109; or the KCTCS course CHM 100 or CHM 102.  
Textbook: Nivaldo J. Tro, *Chemistry: A Molecular Approach, 2nd Edition*, Pearson, 2011.  
Required: Mastering Chemistry access code  
Supplies: The University of Kentucky Online System (it is called Blackboard and is accessible through myUK)

## **COURSE DESCRIPTION AND GOALS**

A study of the principles of chemistry and their application to the more important elements and their compounds. The overall goal of this course is for students to learn the ways scientists work, to conduct basic science, and to actively engage chemical methods with the objective of attaining some understanding of the way science works in and with the natural and social worlds. By taking this course, students will be able to effectively learn and think like a chemist in a complex, multi-disciplinary society.

## **GENERAL EDUCATION INFORMATION**

CHE 105, when combined with CHE 111, will satisfy the general education curriculum, UK Core, requirements for Learning Outcome #1 (Intellectual Inquiry; Inquiry in the Natural Sciences). The overall goal of UK Core is to incorporate experiences that produce understanding of the process of inquiry and help students develop critical thinking skills.

Student Learning Outcomes: By the end of CHE 105, students will be able to:

- 1) Describe methods of inquiry that lead to chemical knowledge, and distinguish scientific fact from pseudoscience.
- 2) Explain fundamental principles of chemistry.
- 3) Apply chemical principles to interpret and make predictions.
- 4) Demonstrate an understanding of discoveries that changed our understanding of the world.
- 5) Give examples of how chemistry interacts with society.
- 6) Conduct a hands-on project. This learning outcome will be fulfilled by the student taking the accompanying General Chemistry Lab (CHE 111).
- 7) Recognize when information is needed and demonstrate the ability to find, evaluate, and use sources of chemical information.

## ADMINISTRATIVE INFORMATION

1. This course is *not* open to students who have completed both CHE 104 and CHE 108. However, this course *is* open to students who have completed only CHE 104.
2. This course is part of UK Core and can be taken together with CHE 111 to fulfill part of the Natural, Physical and Mathematical Sciences requirement.
3. Professor Stephen Testa, Director of General Chemistry, and Ms. Amy Bessin, Assistant to the Director, coordinate and administer all of the general chemistry courses. They are located in the Office of General Chemistry (CP-120) and can be contacted via email (GenChemOffice@uky.edu), by phone (257-3882), or by visiting the office during normal office hours (8:00 AM to 4:30 PM).
4. If you have a documented disability that requires academic accommodations in this course, please make your request to the University Disability Resource Center. The Center will require current disability documentation. When accommodations are approved, the Center will provide the instructor with a Letter of Accommodation that details the recommended accommodations. Contact Jake Karnes, the Director of the Disability Resource Center, at 859-257-2754 or [jkarnes@email.uky.edu](mailto:jkarnes@email.uky.edu). Any student with a certified disability must provide appropriate documentation to the Assistant to the Director no later than the last day for adding a class (June 8, 2012).
5. All Distance Learning Services can be found at <http://www.uky.edu/DistanceLearning/>. Distance Learning Library Services can be found at <http://www.uky.edu/Libraries/DLLS>
  - a. Carla Cantagallo, DL Librarian, Email: [dlservice@email.uky.edu](mailto:dlservice@email.uky.edu)
  - b. Local phone number: 859-257-0500, ext. 2171;
  - c. Long-distance phone number: (800) 828-0439 (option #6)
6. You will be responsible for finding a proctor for each of the online exams offered throughout this course. The instructions for finding the forms for registering a proctor can be found on the course Blackboard site.
7. It is now official university policy that students must earn an 'A', 'B', or 'C' in CHE 105 (or CHE 108) to be able to take CHE 107. There will be NO exceptions to this policy.
8. Administrative dates:

June 7, 2012	First day of the course
July 4, 2012	Independence Day: Academic Holiday
July 11, 2012	Last day to drop a course
August 2, 2012	Last day of the course

## COURSE MATERIAL

1. Textbooks may be purchased from the following:
  - a. Kennedy Bookstore, 405 S. Limestone, (859) 252-0331 <http://www.kennedys.com>
  - b. UK Bookstore 106 Student Center Annex, (859) 257-6304 <http://www.uk.bkstr.com>
  - c. Wildcat Textbooks, 563 S. Limestone, (859) 225-7771 <http://www.wildcattext.com>
  - d. The online book can be purchased, along with the homework system, at [www.MasteringChemistry.com](http://www.MasteringChemistry.com)
  - e. Internet bookstores are fine (like Amazon), but you will need to rush shipping
2. Homework and tests will occur through an online program called Mastering Chemistry. You will need to purchase a code to get access to the web site. Codes can be purchased at the same places that you buy the textbook.
3. Lectures for all of the course material were previously recorded in the spring of 2011, and are available for your viewing by clicking on the 'Lectures' tab in Blackboard. It is recommended that you print out the lecture notes first (by clicking on the Lecture Notes tab in Blackboard), watch the lectures (taking notes where appropriate), study the material (including looking at the example problems in the book), and only then doing the homework problems.

## GRADING

Grades for the course will be assigned on the basis of the scale shown below. Please note that final numerical grades will not be rounded in assigning final letter grades.

A:  $\geq 90$     B:  $\geq 80$  and  $< 90$     C:  $\geq 70$  and  $< 80$     D:  $\geq 60$  and  $< 70$     F:  $< 60$

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

Three Examinations (20% each)	60%
Assigned Homework	15%
<u>Comprehensive Final Examination</u>	<u>25%</u>
Total	100%

The Department of Chemistry adheres rigorously to University policy about awarding grades of "I" (Incomplete). See "Student Rights and Responsibilities" at: [www.uky.edu/StudentAffairs/Code/](http://www.uky.edu/StudentAffairs/Code/). Go to Part II: Rules of University Senate, Section V, 5.1.3.2.

### Examinations

There will be three 60-minute examinations and a 2-hour comprehensive final in this course. The final examination will be divided into four sections that correspond to the three regular examinations and the material presented after the third examination.

*Regular Exams.* Graphing calculators, calculators with large memory banks, and calculators that permit the entering of alphabetic text are not permitted. No TI-80 series or higher graphing calculator is permitted

*Final Exam.* The final exam will be available on Thursday, August 2<sup>nd</sup> from 8:00 AM to 4:00 PM. Contact the Assistant to the Director in CP-120 at least two weeks in advance if you have a course conflict with this time. If you miss the final exam with an excused absence, contact the Assistant to the Director of General Chemistry within a week of the missed exam to make alternative arrangements, which may include receiving an “I” grade and taking the final exam given to students the following semester.

*Exam Replacement Policy.* On the final examination, you have the opportunity to improve your **lowest** score of the three regular exams. The final exam is divided into four sections, with the first three sections corresponding to regular exams 1, 2, and 3. If your grade on the part of the final that corresponds to your lowest exam grade is improved, we will use the grade from the final in place of the regular exam grade. The purpose of this policy is to motivate students to improve their understanding of the material they found most difficult. If an exam is missed and is not excused, a zero will be given, and this will then be considered your lowest exam score.

*Excused Absences from Exams.* There will be no separate make-up examinations. However, for those students who miss one of the regular examinations with a legitimate, documented excuse under the guidelines outlined in the University Senate Rules, and who obtain permission within a week of the regular exam date, the score on the section of the final examination pertaining to the material of the missed examination will be converted to a percentage and automatically substituted for the score on the missed examination. Once an exam is excused, the exam replacement policy stated above will apply to the other regular exams. To be excused from an exam, you must contact the Assistant to the Director of General Chemistry with legitimate documentation within a week of the missed exam. All documentation must expressly mention the date for which you are seeking the excuse. No exceptions to this policy will be made, as we cannot effectively accommodate last minute requests. Purchase of airline tickets, participation in weddings, and participation in any other activities not specifically allowed by University Senate rule 5.2.4.2 are not legitimate reasons to be excused from an exam. If you miss an exam due to illness, you must provide a signed doctor’s or hospital’s official note which provides contact information for your health care provider. If in doubt, contact the Assistant to the Director of General Chemistry for clarification.

*Technical Details of Examinations.* The online examinations will be taken through the secure online quiz system in Mastering Chemistry. You will have to use your online account within Mastering Chemistry with your personal password to access your particular exam. The exam will be graded electronically, wherever appropriate, immediately upon its completion, and this grade will be accessible only by your instructor through the password-protected Mastering Chemistry portal.

The examination will be available beginning 8 hours before the due date/time. The examination window will be from 8:00 AM to 4:00 PM on the date of the exam. It is your responsibility to make sure that you access the material during that time period. You can access the examination any time during the 8-hour window but you can only access it once. Once you access an examination you have 60 minutes (or 120 minutes for the final) in which to complete and submit it (the latest you should access an online examination is 2:00 PM). It is your responsibility to watch the time and submit the examination before the time limit expires. The program will automatically stop accepting answers once time runs out. You cannot use your text

book or any other notes when taking an examination. Grades will be submitted to Blackboard within three days of the last student completing the exam.

If you experience technical difficulties contact the Customer Service Center at 859-218-HELP (4357) or by e-mail at [helpdesk@uky.edu](mailto:helpdesk@uky.edu). Please also inform the course instructor when you are having technical difficulties. If you have questions while taking the exam, first try calling Ms. Stratman at (812) 430-6643. She will be in her office during the entire examination period. If you are unable to contact her by phone: send her an e-mail and include a phone number where you can be reached. She will contact you ASAP.

*Exam Proctoring.* Each of your exams for this course will need to be proctored by a university-approved proctor. To ensure that you have made adequate proctoring arrangements, you will have to complete a proctoring assignment on Mastering Chemistry prior to each exam. The proctoring assignments are due at 10:00 PM two days prior to each exam, and you must receive a 100% on the assignment before you will be able to take the exam. Note that the proctoring assignments, while necessary, are not counted as homework assignments. Below are the due dates for each of the exam proctoring assignments:

Proctoring for Exam I	Tuesday, June 19
Proctoring for Exam II	Tuesday, July 3
Proctoring for Exam III	Tuesday, July 17
Proctoring for Exam IV	Tuesday, July 31

### Homework

This course uses an online homework system called Mastering Chemistry (a product of Pearson publishers). You can access the website at [www.MasteringChemistry.com](http://www.MasteringChemistry.com). Homework is worth 15% of your final grade. It is important to pay attention to the due dates of the homework. Each homework assignment is designed to take between 2 and 3 hours to complete. Individual homework assignments are only rarely excused, so it is highly recommended that you complete these assignments early.

### **CHEATING**

According to the University Senate Rules (6.3.2), cheating includes, but is not limited to, the wrongful giving, taking, or presenting of any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade. Presenting falsified documents to obtain an excuse from an exam, assignment, or class constitutes cheating and will result in a grade of “E” for the course. The fact that a student might not have benefited from an action is not by itself proof that the action does not constitute cheating. The penalty for cheating is a minimum of an “E” on the assignment involved and can be as severe as an “E” for the course. Sanctions imposed may include, and have included, suspension, dismissal, and expulsion from the University.

### **GETTING HELP**

*Blackboard Resources.* The “Course Help” button in Blackboard lists your instructor’s office hours and other helpful information. Lecture notes will be posted in Blackboard under the

“Lecture Notes” button on the menu to the left of the home screen. You will find several old examinations by clicking on “Old Exams” on the left-hand menu as well.

*Email Communication.* In all e-mails to faculty or staff in General Chemistry, please include the following:

- In the subject field: Course / Section / Subject. For example, a student in CHE 105 section 229 with a question about homework would write the following: CHE 105-229 Mastering Question.
- In the body of the message: Full name and UK student ID number.

E-mails without the above information or that contain inappropriate or offensive language or tone may not be answered. We will try to respond to emails within one business day.

### WHOM TO CONTACT

*Your Instructor (Ms. Stratman):* All issues regarding homework, including technical difficulties, questions about material, questions about grades, help regarding course material, exam material, and exam grades.

*Assistant to the Director of General Chemistry (Ms. Bessin).* Excused absences and certified disability forms. If you are in doubt about whom to contact and **if your question is not related to homework** then contact Ms. Horner.

*Director of General Chemistry (Professor Stephen Testa).* Anything you would like to discuss regarding the administration of the course, including issues with your instructor.

### 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 policy applies especially to “professional” note-taking services and companies that publish such material on the internet, in written form, or in any audio format.

### APPROPRIATE ONLINE BEHAVIOR

Students are expected to maintain decorum that includes respect for other students and the instructor, to regularly log in to the course, and to display an attitude that seeks to take full advantage of the educational opportunity. All students are expected to be prepared to work and actively participate in class activities. Virtual communication and discussion "in cyberspace" occur in a social environment where normal rules of social interaction apply. The remoteness of the recipients is no excuse to behave in an anti-social manner and post unacceptable messages. Unacceptable messages include those that harass, intimidate, threaten, belittle, ridicule, expressed hatred for, or aggression toward others. Let us be mindful to avoid words that imply that some groups of people are less worthy than others (e.g., avoid racist, sexist, anti-Semitic, ageist, and homophobic language). Discussion board and other electronic communication for this course should relate only to the course subject matter, generally respond to the instructor threads, and always seek to further the aims of that particular discussion forum or chat session (e.g. stay on topic). Contributions to discussion boards and synchronous chat are the intellectual property

of the authors. Students who quote another person in class projects, publications or even in remarks made on the discussion board should always acknowledge the source of that quote (e.g., do not plagiarize your classmates). Personal comments about other users and their views should not be placed in any of our Blackboard course areas that are viewable by other users. Do not copy private messages to another person without the author's explicit permission. Consult the UK Student Rights and Responsibilities regarding the steps for addressing unresolved academic issues at <http://www.uky.edu/StudentAffairs/Code/part2.html>

### OFFICE HOURS

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

Instructor	Section	Phone/E-mail	Office Hours	Office
Ms. Pauline Stratman	229	(812) 430-6643 <a href="mailto:psst223@uky.edu">psst223@uky.edu</a>	All office hours will be virtual at <a href="http://connect.uky.edu/che105s12/">http://connect.uky.edu/che105s12/</a> and will be held 2:00 – 3:00 PM on Tuesdays before exams and from 3:00 – 5:00 PM on homework due dates (see below) or by appointment.	online

### COURSE SCHEDULE

DATES	CHAPTER	TOPICS
June 7		Become Familiar with The Syllabus
June 8-13	CH 1	Matter, Measurement, and Problem Solving
June 14-18	CH 2	Atoms and Elements
June 19-20	CH 3	Molecules, Compounds, and Chemical Equations
June 21	CH 1-3	<b>EXAM I (open 8:00 AM – 4:00 PM)</b>
June 22-27	CH 4	Chemical Quantities and Aqueous Reactions
June 28 – July 4	CH 5	Gases
July 5	CH 4-5	<b>EXAM II (open 8:00 AM – 4:00 PM)</b>
July 6-11	CH 6	Thermochemistry
July 12-14	CH 7	The Quantum Mechanical Model of the Atom
July 15-18	CH 8	Periodic Properties of the Elements
July 19	CH 6-8	<b>EXAM III (open 8:00 AM – 4:00 PM)</b>
July 20-25	CH 9	Chemical Bonding I: Lewis Theory
July 26 – August 1	CH 10	Chemical Bonding II: Molecular Shapes, Valence Bond Theory, and Molecular Orbital Theory
Thursday, August 2 <sup>nd</sup>	<b>CH 1 - 10</b>	<b>FINAL EXAM (open 8:00 AM – 4:00 PM)</b>

<b>HOMEWORK DUE DATES</b>		
Introduction Assignment	Monday, June 11	10:00 PM
Chapter 1	Wednesday, June 13	10:00 PM
Math Review	Saturday, June 16	10:00 PM
Chapter 2	Monday, June 18	10:00 PM
Chapter 3	Wednesday, June 20	10:00 PM
Chapter 4	Wednesday, June 27	10:00 PM
Chapter 5	Wednesday, July 4	10:00 PM
Chapter 6	Wednesday, July 11	10:00 PM
Chapter 7	Saturday, July 14	10:00 PM
Chapter 8	Wednesday, July 18	10:00 PM
Chapter 9	Wednesday, July 25	10:00 PM
Chapter 10	Wednesday, August 1	10:00 PM

### **TECHNOLOGY REQUIREMENTS**

Complete the following steps to make sure your computer is correctly configured and the necessary software is installed. Note: You will not be able to access course material if you fail to complete these steps. It is your responsibility to make sure everything works on your computer well before homework and quiz due dates.

1. Go to this site to check the minimum hardware, software and browser requirements: <http://wiki.uky.edu/blackboard/Wiki%20Pages/Bb9%20Hardware%20and%20Software%20Requirements.aspx>
2. Internet Explorer is NOT recommended for Blackboard. Firefox is the recommended Internet browser for the course. Go to <https://download.uky.edu/> to download a free version of Firefox. Log in with your LINK BLUE id and password and search for Firefox.
3. Go to <http://java.com> and click on the Free Java Download button. Run the installer to get the latest version.
4. You will also need Flash, Adobe Acrobat Reader and QuickTime movie player. Go to <http://wiki.uky.edu/blackboard/Wiki%20Pages/Browser%20Check.aspx> then click BbGO! If you do not have these installed, you can download them from this site.
5. To download Windows Media Player, click this link: <http://www.microsoft.com/windows/windowsmedia/player/10/default.aspx>



6. Students and faculty can download Microsoft Office Suite (including Word and PowerPoint) from this site: <https://download.uky.edu/>.

7. All office hours, help sessions, and other meetings will be virtual and will be conducted using Adobe Connect at <http://connect.uky.edu/che105s12/>. Your computer must adhere to the system requirements listed at <http://www.adobe.com/products/adobeconnect/tech-specs.html>. Furthermore, your computer must be equipped with an audio card or equivalent, and you must have speakers, ear buds, or a headset. A web camera and a microphone are also desirable, but are not required. To prevent echo, you may not use speakers with an enabled microphone, so a headset is desirable. It is possible for you to communicate with me (PS) by chat, but you must be able to at least watch and listen to the virtual presentation/discussion.

8. For the Mastering Chemistry website to run correctly, make sure your computer and the computer you will be taking the exams on adhere to the website system requirements, which can be found at [www.masteringchemistry.com/site/support/system-requirements.html](http://www.masteringchemistry.com/site/support/system-requirements.html).

## **BLACKBOARD AND MASTERING CHEMISTRY HOMEWORK INSTRUCTIONS**

To access Blackboard, go to <http://myuk.uky.edu>. Your username and password are the same as your UK e-mail address. It is your responsibility to log in and not to miss announcements and assignments. Computer problems or ignorance of an assignment's due date is no excuse for missing assignments. Your first assignment is due Monday, June 11<sup>th</sup>. Log in to Blackboard and the Mastering website on the first day of classes so that any technical problems can be solved before your first assignment is due.

*Help with Blackboard.* If you need technical assistance with Blackboard, contact the UK IT Customer Service Center by calling 218-4357, by visiting McVey Hall, Room 111 (M-F, 7:00 A.M. – 6:00 P.M.), or by visiting The HUB at the WT Young Library (Sunday, 1:00 P.M. – 10:00 P.M. and M-F, 6:00 P.M. – 10:00 P.M.). You may also e-mail your questions to [helpdesk@uky.edu](mailto:helpdesk@uky.edu). Keep in mind that the helpdesk may be slower in responding to e-mail requests than to phone calls or personal visits to McVey Hall or the HUB.

Once in Blackboard, click on the link for CHE 105. You will use Blackboard to access the following content areas using the buttons on the left side of your screen:

- I. Announcements: Current announcements will be displayed on the opening course screen. Be sure to log into Blackboard daily, so that you can read the announcements from your instructor or the General Chemistry office.
- II. My Grades: Exam grades will be posted here. Homework grades will be posted within your Mastering Chemistry account.

- III. Exam Information: Here you will find information about each exam, including answer keys for exams.

To access Mastering, go to [www.masteringchemistry.com](http://www.masteringchemistry.com). You will need to register your Mastering access code the first time you visit the website. Remember your username and password because you will need to log on to this website to complete each of your Mastering homework assignments for the semester.

*Help with Mastering.* For issues relating to Mastering, first read the FAQ in Blackboard, then access the help section of the Mastering website, and as a last resort contact your instructor.

- IV. Assigned homework will be completed through Mastering. These assignments count as 15% of your grade. Follow the registration instructions given for Mastering, using the access code bought with your textbook, purchased separately at the University Bookstore, or purchased online. The Course ID for your class/section is listed below. Follow the instructions carefully. Note that you must enter your student ID number (without the beginning “9”) during registration in order to get credit for the Mastering homework.

Please note:

- a. The Course ID for CHE 105-229 is: **MCTESTA06705**
- b. The Mastering homework is designed to help you learn the material in addition to study questions. It is important that you work the assignment yourself, taking the time to use the tutorials and hints in order to understand the problem. If you try to find shortcuts, have others give you the answer, etc., your performance on exams will suffer. This portion of your grade is about learning, not just accumulating points.
- c. To work an assignment, click on the Assignments link. You may print the assignment and enter and exit Mastering as often as you need.
- d. You are allowed 4 attempts at each question. Each time you enter an answer, click on the Submit button at the bottom. Doing this will grade the question and give you feedback. If a question asks for a multiple part answer, you must correctly enter all parts of the answer before hitting Submit; otherwise, your attempt will be counted incorrect.
- e. Some problems in Mastering require the answer to have the correct number of significant figures. If you get an answer wrong on the first couple of attempts, go back through your work to make sure it is correct, and then check for the correct number of significant figures.
- f. Although you receive four attempts for each question, you will lose partial credit for each incorrect attempt at a multiple choice question.

- g. Your first assignment, Introduction Assignment, will teach you how to enter answers into Mastering properly. It will demonstrate many of the features of Mastering, such as hints and tutorials. This should be the easiest assignment of the semester and is very important for proper understanding of how Mastering works. Do not miss it!
- h. The one assignment with the lowest score will be dropped during final homework grade calculations at the end of the semester. Therefore, one assignment is automatically excused through this drop policy. A percentage score will be calculated for each of the homework assignments. After the one lowest percentage is dropped, the homework score will be the average of the remaining percentages.
- i. To receive an extension on an assignment, you must provide a legitimate, documented excuse that is consistent with University policy. This excuse must explain why you could not work on the homework for a whole week prior to the due date. Homework extensions will rarely be granted. The documentation must be turned in to the Assistant to the Director in the General Chemistry Office (CP-120 or [GenChemOffice@uky.edu](mailto:GenChemOffice@uky.edu)) within one week of the homework due date. Extensions will not be granted after you have viewed the key.
- j. You can view your score on each of the Mastering assignments through the Gradebook link on the Mastering website. At midterm and at the end of the semester, your overall grade for the Mastering assignments will be loaded onto Blackboard. Be sure to check your grades from time to time to ensure that you are receiving credit for your assignments. If you find an error, contact Ms. Bessin right away.
- k. You can access other helpful information in Mastering in addition to homework assignments. Click on Study Area on the left side of the homepage. This area will contain various study aids to supplement the course.