Eastern Kentucky University
Department of Chemistry
CHE 112 General Chemistry II CRN XXXXX
3 credit hours
Fall XXXX

Professor's name
Professor's Office#
Professor's Contact Information

Catalog Course Description:

CHE 112 General Chemistry II. (3) I, II. Prerequisite: CHE 111 and 111L (C or better). Prerequisite or Corequisite: CHE 112L or CHE 112HL (C or better). Continuation of CHE 111. Kinetics and equilibrium, solution chemistry, energy changes in chemical reactions, descriptive inorganic chemistry. Prepares students for further studies in chemistry. A withdrawal from CHE 112 must be matched by a withdrawal from CHE 112L or CHE 112HL. Gen. Ed. 4B.

Text:

General Chemistry: The Essential Concepts, Seventh Edition, by Raymond Chang and Kenneth Goldsby. New York: McGraw-Hill (2014) AND an access code for Learn Smart, the online study tool offered by McGraw-Hill.

Bookstore Options:

Learn Smart access code and electronic version of text (bookstore price: $195)
Learn Smart access code, electronic version of text, and hardcover copy of text (bookstore price: $295)
There is a paperback version of the text available, but this is not carried by the EKU bookstore.

Blackboard

The Blackboard course management system will be used in this course to send announcements, show unofficial grades, communicate with students, give quizzes, etc. Students must be able to access Blackboard.

Student Learning Outcomes

Upon completion of CHE 112, General Chemistry II, the student will be able to:

1. Combine the concepts of bond polarity and molecular geometry to predict molecular polarity. (Integration across course)
2. Predict and describe the intermolecular forces that exist in bulk matter. (Explaining the major concepts of the natural sciences and Applying scientific principles to make reasonable and valid conclusions)
3. Correlate intermolecular forces with the physical properties of pure substances and two component mixtures. (Applying scientific principles to make reasonable and valid conclusions)
4. Summarize the colligative properties of solutions. (Explaining the major concepts of the natural sciences)
5. Use empirical chemical kinetics data to determine whether a reaction is zeroth, first, or second order with respect to each reactant in the system. (Understanding of the methods of scientific inquiry and Applying scientific principles to make reasonable and valid conclusions)

6. Express the relationship between reaction rate and temperature. (Explaining the major concepts of the natural sciences)
7. Describe the behavior of systems in chemical equilibrium and predict the result(s) of stresses applied to the system. (Explaining the major concepts of the natural sciences and Applying scientific principles to make reasonable and valid conclusions)
8. Differentiate acids from bases and their unique roles in chemical reactions. (Explaining the major concepts of the natural sciences)
9. Obtain equilibrium concentrations of reactants and products in chemical mixtures and calculate equilibrium constants. (Applying scientific principles to make reasonable and valid conclusions)
10. Use standard thermodynamic data to calculate standard reaction enthalpies, entropies and Gibbs energies. (Applying scientific principles to make reasonable and valid conclusions)
11. Understand the interrelationships between enthalpy, entropy, Gibbs energy, and equilibrium. (Explaining the major concepts of the natural sciences)
12. Predict the direction of spontaneous change. (Applying scientific principles to make reasonable and valid conclusions)
13. Construct and label electrochemical cells. (Explaining the major concepts of the natural sciences)
14. Calculate standard and non-standard cell potentials. (Applying scientific principles to make reasonable and valid conclusions)

Evaluation Methods:

This course consists of three 50 minute lectures (NSB 4101) each Monday, Wednesday, and Friday. In addition to the required reading of the text, practice homework (not for a grade) will be assigned each class meeting, on-line (Learn Smart) homework and CONNECT problem sets will be assigned for grades, hree tests will be administered in-class – September 16, October 24, and December 2; and a comprehensive group final exam will be given from 3:30 – 5:30 PM on Tuesday, December 13, 2016.

Grading will follow the standard 10 point collegiate science grading scale (below on left) and your letter grade in the course will be assigned on the basis of a weighted average of the tasks you'll be performing during the semester (below on right).

GRADE	RANGE	% VALUE	ACTIVITY
A	90.00 and above		
B	80.00 – 89.99	8	Learn Smart Assignments
C	70.00 – 79.99	22	CONNECT Homework
D	60.00 – 69.99	45	In-class Tests
F	59.99 and below	25	Final Exam

Final Exam

The final exam will be held on **Tuesday, December 13, 2016, from 3:30 – 5:30 pm**. *This exam is a joint final exam for all CHE 112 students*. It is a comprehensive, standardized ACS exam and no make-up will be available. ***Any student who does not take the final exam will automatically receive a grade of F for the course.*** The complete final exam schedule is published in the Colonel's Compass. The room assigned for the final will be announced before the end of the semester.

Non-programmable scientific calculators will be provided by the chemistry department for all exams taken in CHE 112. Opportunities to practice using these calculators will occur during class before the first exam, and as often as possible thereafter.

Student Progress:

A copy of your test scantrons will be returned to you after each test, test grades will be posted to BlackBoard, and Sapling will compile and report your individual homework assignment grades as well as a current average grade on their website.

Attendance Policy:

The University requires all students to attend all lecture and all laboratory periods. Your attendance will be documented when you sign the roll sheet each class meeting.

Research shows that students who regularly attend class are more likely to succeed. So, regular class attendance or online participation is expected of all students. Students should arrive to class on time and avoid leaving class before dismissed to circumvent disruptions to the instructor and other students. Students who arrive late for class without an adequate reason will be counted as ½ **absent**; Students who leave class before it is dismissed without the permission will be counted as absent for the **entire period**.

Students who present the instructor with an adequate and documented reason for an absence will be excused and allowed to make up the work missed, if feasible. **Adequate reasons** involve circumstances beyond the student's control, such as illness; serious emergencies; special curricular requirements (e.g., field trips and professional conferences); military obligation; inclement weather conditions; religious holidays; court-imposed legal obligations; approved accommodations by the Office of Services for Individuals with Disabilities; medically necessary absences due to pregnancy or childbirth; or death in the immediate family, or participation in official university-sponsored activities.

Students who are to be absent for participation in activities sponsored by the University (e.g., a class, University athletics program, Student Government Association or sponsored organization) and approved by the Dean of the college/unit in which the activity occurs (or the Provost if the sponsoring organization is outside of an academic college/unit) shall show their instructors the official notice of such approval. **The University Activity Involving Student Absences from class form** in the following link should be used as documentation for absences. (http://forms.eku.edu/sites/forms.eku.edu/files/university_sponsored_activity_involving_student_absences.pdf)

To the extent possible, students should notify the instructor **in advance of** an absence. Students are encouraged to complete scheduled assignments **prior** to the absence when possible. If students cannot give advance notice of an absence, they should notify the instructor **as soon as possible** of the reason for the absence with appropriate documentation.

It is the student's **responsibility** to obtain class notes from a member of the class of any missed lectures. Initiating the request to make up class work is the student's responsibility. The make-up exam will be only given in the first week (**5 class days**) students come back to school.
No absence of any nature will be construed as relieving the student from responsibility for the timely completion of all work assigned by the instructor (**either in-class or assigned on-line**).
20% unexcused absences **without the approval of the instructor or documented adequate reasons for absences, as defined above,** will result in loss of the attendance credits given in the class.

Last Date to Drop the Course: 11/13/16

Disability Statement:

The University strives to make all learning experiences as accessible as possible. If you are registered with the EKU Center for Student Accessibility (CSA), please obtain your accommodation letters from the CSA, present them to the course instructor, and discuss the accommodations needed. If you believe you need an accommodation and are not registered with the CSA, please contact the office in 361 Whitlock Building by email at disserv@eku.edu or by telephone at (859) 622-2933. Upon individual request, this syllabus can be made available in an alternative format.

Academic Integrity Policy:

Students are advised that EKU's Academic Integrity policy will strictly be enforced in this course. The Academic Integrity policy is available at www.academicintegrity.eku.edu. Questions regarding the policy may be directed to the Office of Academic Integrity.

Official E-mail:

An official EKU e-mail is established for each registered student, each faculty member, and each staff member. All university communications sent via e-mail will be sent to this official EKU e-mail address. Please check it often.

Course Requirements:

Course Outline:

General Chemistry II is scheduled to cover most of Chapters 9, 10 and 12 – 19 in the text. Students should (preferably) read the text before coming to class to familiarize themselves with the material. Students are encouraged to try the in-chapter practice exercises on their own as part of the reading assignment. Relevant practice homework problems will be assigned after each lecture to help reinforce the topics covered. Questions about the daily homework may be asked in class the one next lecture after they have been assigned, *or anytime* during office hours. Questions about ANYTHING related to Science may be asked ANYTIME in class, or ANYTIME during office hours, or (thanks to e-mail and cell phones) ANYTIME you have one.

This schedule is *very* tentative and may be subject to change **EXCEPT** that the **TEST DATES** will only change if circumstances disrupt normal university operations.

Date or Approximate Time Frame	Material To Be Covered or Activity Scheduled
Monday, August 22, 2016	First Class Meeting – the Mandatory Attendance Policy will be enforced
August 22, 24, 26, 29, 31	Review of pertinent CHE 111 topics and Chapters 9 & 10
September 2, 7, 9, 12, 14	Chapter 12
September 19, 21, 23, 26	Chapter 13
Friday, September 16, 2016	**Test One**
September 28, October 3, 5, 7, 10, 12	Chapter 14
October 14, 19, 21, 26, 28	Chapter 15
Monday, October 24, 2016	**Test Two**
October 31, November 2, 4, 7, 9, 11	Chapter 16
November 14, 16, 18, 21	Chapter 17
November 28, 30, December 5	Chapter 18
Friday, December 2, 2016	**Test Three**
December 7, 9	Chapter 19
Tuesday, December 13, 2016	**FINAL EXAM FOR ALL CHE 112 SECTIONS, 3:30 – 5:30 pm**