

Instructor: Dr. K. Walters
SC 348
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<http://www.nku.edu/~walterske>

Office Hours: I have an open office policy, so stop by whenever you have a question (I will not always be in my office but will always indicate where I can be found or when I will return). My formal office hours are as follows: MWF 10:00 – 11:30, TR 9:15 – 10:30 and 12:30 – 1:40. Feel free to make an appointment for any other time (there are scheduling links in Blackboard). I will also schedule “online” office hours on Blackboard from time to time.

Prerequisite: C or better in CHE 120

Corequisite: CHE 121L (any section) – **Should you drop CHE 121 you will be also dropped from CHE 121L**

Student Learning Outcomes: CHE 121 fulfills the following NKU chemistry department student learning outcomes:

1. Explain the major concepts and experimental findings in the chemical sciences.
2. Utilize critical thinking skills to apply concept knowledge and adapt experimental techniques to: a) form and test hypotheses and b) solve scientific problems.
3. Compile, critically evaluate, and interpret scientific information and data.
4. Evaluate the relationships between chemistry and mathematics, physics, biology, and other disciplines and between chemistry and society.
5. Apply computer technology and other technologies in the comprehension, interpretation, and presentation of the chemical sciences.

Objectives: The NKU General Chemistry faculty have agreed on the following common learning objectives for CHE 121. A more comprehensive list of learning objectives is available on the course blackboard site.

1. Describe the intramolecular and intermolecular bonding of substances, and relate the bonding type and/or structures of substances to their chemical and physical properties.
2. Describe properties of liquids and solids. Understand phase changes and the energy terms associated with them.
3. Discuss the factors that affect the rates of chemical reactions, determine rate laws and carry out calculations involving concentration, time data.
4. Write equations, equilibrium expressions and carry out calculations for various equilibria. Describe how changes in concentration and temperature affect equilibrium reactions.
5. Describe the process of solution formation and the properties of solutions. Calculate the concentration of solutions in a variety of units. Carry out calculations involving the colligative properties of solutions.
6. Characterize acids, bases and salts by Arrhenius or Bronsted-Lowry definitions. Carry out pH calculations. Relate the properties of acids to their structure.
7. Identify and describe the properties of buffer solutions. Carry out calculations involving buffer solutions. Carry out calculations with solutions of slightly soluble salts and describe the factors that affect their solubility.
8. Discuss the relationship between enthalpy, entropy and free energy and their relationship to spontaneity. Carry out calculations of enthalpy, entropy and free energy.
9. Describe voltaic and electrolytic cells. Write equations for oxidation-reduction reactions and calculate cell potentials for these reactions.
10. Describe nuclear reactions, the uses of radioisotopes and the properties of alpha, beta and gamma radiation.

The Student:

1. ...should always come to lecture on time.
2. ...should stay *ahead* of the lecture in the textbook.
3. ...should come to lecture already having read the anticipated material to be covered.
4. ...should participate in lecture at every opportunity to demonstrate comprehension.
5. ...should complete all assignments on time.
6. ...should try to have at least a little fun learning chemistry.

The Instructor:

1. ...should always be on time for lecture and be prepared to teach.
2. ...should present material in a clear, organized manner at a speed necessary to cover all topics.
3. ...should encourage the student to think about the presented material creatively.
4. ...should assign appropriate problems to help the student master the material.
5. ...should prepare fair, thorough exams that cover the presented material.
6. ...should be absolutely impartial in all matters grading.
7. ...should have lots of fun teaching chemistry.

- Required Materials:**
1. *Chemistry and Chemical Reactivity*, by Kotz, Treichel and Weaver (6th Edition), Thomson/Brooks-Cole
 2. OWL pincode (available bundled with text or purchased separately online – if you took CHE 120 in Fall 2008 your code should still work).
 3. TurningPoint ResponseCard RF remote
- Course Content:** Selected parts of chapters 13-20 and 23.
- Web Enhanced:** This is a web enhanced course. Students meet at regularly scheduled class time and will need access to the internet to fulfill course requirements. All sections of CHE 121 are web enhanced.
- Blackboard:** The NKU Blackboard website is used extensively in this course (<http://learnonline.nku.edu>). Course announcements, grades, online supplementary materials, discussion boards, and online quizzes are available *only* through the site, and you are responsible for all posted information. Take advantage of all the presented material (especially the discussion board), and please post questions to me on the discussion boards if possible rather than sending me email. You should also utilize the NKU General Chemistry website (http://www.nku.edu/~chemistry/general_chem/), where you will find helpful handouts and old exams.
- Communication:** You should always feel free to seek any appropriate out-of-class assistance from the instructor in your efforts to master the materials presented in this course. While you should feel free to contact your instructor, please keep the following in mind:
- Use the posted office hours of the instructor or schedule an appointment if you have many questions to answer or if the explanation is better conducted in person than via email. The instructor reserves the right to request that you come to their office if he cannot adequately respond to questions posed in emails or voicemails.
 - Come to the instructor's office with specific questions to address, which will make the interaction more productive.
 - Do not make a habit to only visit the instructor's office a few minutes before a homework deadline or exam period. In general no significant assistance will be provided within 2 hours of such a deadline.
 - Emails sent to your instructor should have a specified subject in the subject line that starts with CHE 121 (e.g., CHE 121 - Question on yesterday's quiz). Emails not conforming to this structure will be considered spam mail by the instructor and likely deleted with no response. When possible, use your NKU email account to send the email, and sign all emails with your full name!
 - Emails sent from your instructor will be sent to your NKU email account and will include CHE 121 in the subject line. Make sure you check your email account on a regular basis or have your messages forwarded to the account you regularly use. NKU email accounts also regularly get full with email, which will cause new messages to "bounce" and not be received. Make sure you keep this account under the size limit!
 - Do not expect an instant reply to your email or voicemail messages! The instructor deals with messages in the order received, and usually can respond within 24 hours (possibly longer on the weekends).
 - Refer to the "Talk and Email" section later in the syllabus for more tips on communication with your instructor (and all instructors in general).
- Attendance:** Attendance will be taken in lecture via TurningPoint. If you arrive late you must let the instructor know that you attended lecture at the end of the period, or **you will be counted absent**. You get 2 "**free**" **absences** (no excuse necessary) during the term. Any additional absences will result in the **deduction of 5 points** from your final course grade. If you have a legitimate reason to be absent, it can be excused (and not count towards your free absences) if you provide the instructor with appropriate documentation. Even if you are absent, you are responsible for all information, material, and assignments presented in lecture in addition to any material posted on Blackboard. You will receive zeros for inclass quizzes and/or participation questions, regardless if the absence is excused or unexcused. If you have to leave before the end of the lecture, please inform the instructor before the lecture starts and take a seat at the end of a row or in the back of the room to minimize disruptions. Tardiness is also not tolerated in this class, since it is disruptive to both your instructor fellow students. **For every four tardy lectures, you will receive one absence on your attendance record**. The instructor goes by the clock in SC 308, not your watch!
- Participation:** During lecture you will be asked to answer questions in class to determine mastery of the different topics currently being discussed. You will answer these multiple-choice questions via TurningPoint, which keeps a record of your participation and right/wrong answers. The instructor uses this information to see who needs additional help on particular topics as well as who is actively participating in the lecture. Even if you are present but choose not to participate, you risk losing points from the participation portion of your course grade. Make sure you bring your remote to every lecture! If you forget your remote, please answer all questions on a piece of paper and turn it into the instructor at the completion of the lecture.
- Studying:** It has been said that students should spend 2-3 hours studying for each hour of lecture. Science courses tend to err on the high side of this estimate, so you should commit yourself to studying **7-10 hours each week** during the course. Cramming the last night or two before exams will not be sufficient to comprehend the material.
- OWL:** A requirement of this course is for you to participate in OWL (Online Web-Assisted Learning), an online homework system that gives you the opportunity to master the concepts of this course through repetition (including answering selected end of chapter problems from your textbook in OWL). You will be assigned modules to complete by posted due dates (normally 11:55 PM Wednesday and Sunday, see the course calendar). Failure to complete modules in a timely manner will adversely affect your homework grade, although there are opportunities for you to obtain OWL credit even after the posted due dates. Instructions for logging into OWL are provided online. The instructor tends to take questions directly from assigned homework problems when writing quizzes and exams, so it is advantageous for you to do your best on these problems!

- Quizzes:** There will be eleven quizzes conducted online in Blackboard during the term. Each quiz is worth 10 points and will consist of five or six true/false, multiple choice, and/or short answer questions. Quizzes will be available to take from midnight on selected Wednesdays and Fridays to 2AM the next day as indicated on the course calendar. You will have 45 minutes to complete each quiz. Each student will not receive the same quiz, as each is a random combination of similar questions covering recent topics presented in lecture. You are expected to take your quiz individually and not work together (the NKU Honor Code applies). **There will be no makeup quizzes under any circumstance (including network problems), and missed quizzes will be assigned a zero grade.** Note further that **unannounced quizzes** may be conducted in lecture during the term. You can expect at least three or four in-class quizzes. Only your ten highest quiz scores will count towards your final course grade.
- Exams:** There will be four exams during the semester (2/6, 3/6, 4/3, and 4/24). **These exams will be conducted outside of the normal lecture time**, either from 2 – 4PM or 3 – 5PM depending on your schedule. If your schedule does not permit you to take the exams during either time period, **you must make alternate arrangements with the instructor during the first two weeks of the term.** The exam must be taken on the same scheduled day, but can be taken earlier if needed. **Makeup exams are not permitted**, although you are allowed to substitute your final exam grade for **one missed exam** during the course provided you produce an appropriate reason (and documentation) for your absence. Additional missed exams will have a zero grade. In addition, students may replace their lowest exam grade during the term with their final exam grade if it increases their overall course grade.
- Final Exam:** The final exam (Thursday 5/7, 8:00 – 10:00 AM) in this course is the American Chemical Society general chemistry standardized multiple choice exam, which is cumulative over material learned in both CHE 120 and 121. Percentile scores will be equated to a numeric grade based on your performance compared to others at NKU.
- Honor Code:** The work you will do in this course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of NKU will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements. You should familiarize yourself with the Honor Code at the following website:
- <http://www.nku.edu/~deanstudents/documents/StudentCodeUpdated8-07.pdf>
- Cheating:** Cheating will not be tolerated in this course. In accordance with the Code of Student Rights and Responsibilities, faculty members have the right to determine actions to be taken when a student is caught cheating. In this course, students caught cheating and/or plagiarizing is grounds for immediate dismissal and an F course grade, along with a report filed with the Dean of Students.
- Calculators:** **Programmable and graphing calculators (along with cell phone calculators) are not permitted during quizzes or exams.** A basic scientific calculator (e.g., TI 34II, TI 30X) should be brought to class **every day**, as they will be needed during lecture examples and will be necessary for taking the quizzes and exams. Under no circumstances may calculators be shared during exams, and the lack of an operable calculator will not excuse you from completing the problems! You should also **practice** with this calculator before you use it in an exam!
- Electronic Devices:** Cell phones, pagers, and watch alarms **should be turned off and put away during lecture.** If you anticipate an emergency call (e.g., child sick), please leave your phone on vibrate but put away (in your pocket, not on the desk) and sit at the end of a row or in the back of the room. Should you receive a call, please quietly leave the lecture room to answer it. Should your device audibly ring during class, you will be asked to leave with no further discussion and receive an unexcused absence for the day. **Use of a cell phone or pager during an in-class quiz or exam will be considered cheating**, and appropriate actions will be taken by the instructor. You are welcome to use computers during lecture for note-taking purposes, but should the instructor notice other computer usage not relevant to the lecture (e.g., email, web surfing) your computer privileges will be removed for the remainder of the course.
- Talk and Email:**
- Be mannerly. Before asking "What are your office hours?", check your syllabus. If hours aren't listed or won't work, ask your professor when he or she can meet with you. A reasonable professor will understand that office hours cannot accommodate every student's schedule.
 - When you arrive at the professor's office, knock on the door, even if it's open, and greet your professor by name.
 - If you're coming in to talk because you're having difficulty in a course, there are a few familiar sentences to avoid: "Will this affect my grade?" Whatever "this" is, it will play a part in your grade. How much or how little depends upon the rest of your work. "Can I still get a A/B/C/D/Pass?" This question will usually lead a professor to think that your grade-point average, not learning, is your priority. "I'm an A student." Grade inflation is widespread, and some of those As may not be the most accurate evaluations of your work. Even if they are, your professor won't grade you on the basis of your reputation.
 - If you want to talk to a professor in some other way (about a question that you didn't get to ask in class or an idea that you want to discuss) just do the best you can. Your professor will very likely meet your genuine interest with kindness and encouragement.
 - If you are having difficulty in a course, let your professor know that you realize it, and ask what you can do to improve.

- Ending the conversation can be tricky. Some professors will wrap things up for you, while others will be happy to just keep talking. In other words, a signal that you're "dismissed" may not be coming. So don't hesitate to take the initiative in bringing the conversation to an end, especially if you have other obligations.
- In emails, choose an appropriate greeting. "Hi/Hello Professor [Blank]" is always appropriate. Substitute "Dear" and you've ended up writing a letter; leave out "Hi" and your tone is too brusque.
- Avoid rote email apologies for missing class. Most professors are tired of hearing those standard apologies and acts of contrition.
- Ask politely. "Could you e-mail me the page numbers for the next reading? Thanks!" is a lot better than "I need the assignment."
- Proofread what you've written. You want your e-mail to show you in the best possible light.
- When you get a reply, say thanks. Just hit Reply and say "Thanks," or a little bit more if that's appropriate. The old subject line (which will now have a "Re:" in front) will make the context clear.

Assessment:

Assessment of topics learned in this course will be achieved through the completion of online homework assignments, class participation, and critical thinking problems on quizzes and exams. Course grades are assigned based on the following scheme:

Quizzes (10 pts. each, highest 10 count)	= 100 points
Homework and Participation (150 pts total)	= 150 points
4 Exams (150 pts. each)	= 600 points
Final Exam (150 pts.)	= 150 points
Total possible points	= 1,000 points

<u>Point Total</u>	<u>Grade</u>
900 – 1000	A
800 – 899	B
700 – 799	C
600 – 699	D
0 – 599	F

A C or better is needed in this course to enroll in CHE 310!

Other Items:

- All items on this syllabus are subject to change by the instructor. Check the NKU Blackboard website regularly for updates.
- Students are responsible for reading and understanding all items on the syllabus. Any items not understood must be brought to the attention of the instructor within the first two weeks of class.
- Faculty members reserve the right to dismiss or to have removed a disruptive student from their classrooms.
- No smelly, messy, or loud food is allowed in class. Violators will be asked to leave.
- Students with disabilities who require accommodations (academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. Please contact the Disability Service Office immediately in the University Center, Suite 320 or call 859-572-6373 for more information. Verification of your disability is required in the Disability Services Office for you to receive reasonable academic accommodations. Visit the Disability Services website at www.nku.edu/~disability/.
- As stated in your catalog, a grade of incomplete is given only at the student's request and where there is reasonable possibility that a passing grade will result from completion of the work.

CHE 121-N03 (Walters) Spring 2009

MONTH (WEEK #)	MON	TUES Lecture 8:00 – 9:15	WED	THUR Lecture 8:00 – 9:15	FRI
January (1)	12 Classes Begin	13 13	14	15 13	16 BB Quiz 1
(2)	19 No Classes	20 13/14	21 BB Quiz 2	22 14	23
(3)	26	27 14	28 BB Quiz 3	29 14	30
February (4)	2 Last Day to "X"	3 14/15	4	5 Review	6 Exam 1 (13,14)
(5)	9	10 15	11 BB Quiz 4	12 15	13
(6)	16	17 15/16	18 BB Quiz 5	19 16	20
(7)	23	24 16	25 BB Quiz 6	26 16/17	27
March (8)	2	3 17	4	5 Review	6 Exam 2 (15-17)
(9)	9 No Classes	10 No Classes	11 No Classes	12 No Classes	13 No Classes
(10)	16	17 17	18 BB Quiz 7	19 17/18	20
(11)	23	24 18	25 BB Quiz 8	26 18/19	27
April (12)	30 Last Day to "W"	31 19	1	2 Review	3 Exam 3 (17-19)
(13)	6	7 19	8 BB Quiz 9	9 19	10
(14)	13	14 20	15 BB Quiz 10	16 20	17
(15)	20	21 20/23	22	23 Review	24 Exam 4 (19-20)
May (16)	27	28 23	29 BB Quiz 11	30 23	1 Classes End
(17)	4	5	6	7 Final Exam 8:00 – 10:00	8

- Notes:**
- This schedule is subject to change by the instructor. Please check Blackboard regularly for updates.
 - Numbers indicate chapter content to be covered each class period.
 - Blackboard (BB) quizzes are available online from midnight of the indicated day until 2AM the following morning. Students have 45 minutes to complete the quiz during that time window.
 - Bold borders indicate OWL midnight homework deadlines. See your syllabus and the OWL website for more details.

CHE 121-003: General Chemistry II – Spring 2009

Student's Acceptance of Course Policies

Please fill out and sign the following form and **return it no later than January 23, 2009** to the instructor. Use **a blue or black pen (no pencil)**.

I, _____, have read the entire syllabus describing the course policies for CHE 121-N03, General Chemistry II, taught by Professor Keith Walters. I fully understand these policies and I agree to comply with them during the entire spring 2009 semester.

Signature: _____ Date: _____