

CHEMISTRY 100 (Fall 2016)
Chemistry in Everyday Life

Time & Place: Lectures, Tue, 9.30 – 10.45 a.m, in Faraday Hall (FR) 143. Online work instead of Thur lecture.
Textbook: Chemistry in Context, 8th Edition, 2015, Middlecamp et al., McGraw-Hill, Connect Code req-d.
Instructor: Dr. Victor Ryzhov, Office: Faraday West (now LaTourette Hall) 425, Phone: 753-6955,
e-mail: ryzhov@niu.edu
Office hours: Th, 9:30 - 10:45 a.m., or by appointment, e-mail any time.
Course website: <http://webcourses.niu.edu> (Blackboard)

Course structure and grading:

“Lecture” portion: There will be three exams worth 100 points each.

“Online” portion: There will be twelve (one per chapter) on-line homeworks worth total of 120 pts and twelve (one per chapter) multiple-choice quizzes totaling 60 pts. They will be administered via Blackboard/Connect. There will be up to 80 pts assigned for the on-line discussion board. Each student will have to participate in four of those (initiating discussion topics and posting comments/replies to the existing threads/doing other online assignments). The overall course grading will be as follows:

Out of 560 pts: > 92% = A; >88% = A-; > 83% = B+; > 80% = B; > 77% = B-;
>73% = C+; >70% = C; >61% = D; < 60% = F

This scale may be revised downward (not upward), but this is not guaranteed.

Topic begins	Tentative Topics	HW, Quiz and Forum Due (9.30 am CT)	Reading
8/23	Chemistry for a Sustainable Future		Chapter 0
8/30	The Air We Breathe	9/6	Chapter 1
9/6	Protecting the Ozone Layer	9/13	Chapter 2
9/13	The Chemistry of Global Climate Change	9/20	Chapter 3
9/20	Energy from Combustion	9/27	Chapter 4
9/27	EXAM 1 (Ch. 1-4, 100 pts)		Ch. 1-4
10/4	Water for Life	10/11	Chapter 5
10/11	Neutralizing the Threat of Acid Rain	10/18	Chapter 6
10/18	The Fires of Nuclear Fission	10/25	Chapter 7
10/25	Energy from Electron Transfer	11/1	Chapter 8
11/1	EXAM 2 (Ch. 5-8, 100 pts)		Ch. 5-8
11/8	The World of Plastics and Polymers	11/15	Chapter 9
11/15	Manipulating Molecules and Designing Drugs	11/22	Chapter 10
11/22	Nutrition: Food for Thought	11/29	Chapter 11
11/29	Genetic Engineering and the Molecules of Life	12/6	Chapter 12
12/8	EXAM 3 (Ch. 9-12, 100 pts) – 10 am during Finals week		Ch. 9-12

Exams:

There are three hourly exams scheduled for 10/1, 11/5 at the normal class time and 12/8 (Thu during finals week) at **10 a.m. (note time change)**. If you are unable to make it to NIU on that day, make arrangements with me PRIOR to the exam. No make-up exams will be given after the test date. All exams will be multiple-choice and graded by Scantron.

Online quizzes:

There is one HW and quiz per each chapter, administered via Blackboard/Connect. Each HW consists of 10 conceptual, multi-step, or algorithmic questions with hints and feedback. The total for each HW is 10 pts max, with 120 pts available for all semester. Each HW can be attempted three times with no penalty. Each quiz has 10 multiple-choice questions worth a total of 5 pts per quiz. You have two attempts at the quiz; the second attempt will carry a 20% penalty. The total for all 12 quizzes is 60 pts max. The deadline is the date indicated in the Table above at 9.30 a.m. CT (beginning of class). The late penalty is 20% for each day.

Discussion Forum:

About fifteen percent of your grade (up to 80 pts total) will be based upon your postings to the discussion groups. For four out of twelve chapters you will be expected to initiate a post and then respond to at least two of your classmates' posts or do other assigned tasks. If your last name starts with A-F, you will be participating in the forums for chapters 1, 4, 7, and 10. If your last name starts with G-K, you will be participating in the forums for chapters 2, 5, 8, and 11. If your last name starts with L-Z, you will be participating in the forums for chapters 3, 6, 9, and 12. First, make your post to the appropriate chapter (half

of the credit for each chapter). Your post (at least ten sentences long) will serve as evidence that you have read the book, studied the web resources, and worked on it. After that, examine other students' submissions and respond (via reply, at least five sentences long) to two or more of them (the other half of the credit for each chapter). There will be instructions for the forum posted on Blackboard for every chapter.

I will be monitoring the discussions, reading all the submissions and responses, evaluating them, informing you from time to time of those evaluations, and occasionally making helpful suggestions for improving submissions and, if necessary, correcting errors. More detailed instructions will be posted on the Blackboard. The discussion forum is graded on participation (not on content), but posts/replies that fail to meet the course standards (length, appropriateness of topic, respect for other classmates' viewpoints) may receive zero points.

Textbook and Connect Code:

Textbook is required for successful completion of the class. You may attempt to go through the class without it (lecture powerpoints provide about 80% of information) but it is not recommended. Sharing a textbook between two or more people is possible. The text is Chemistry in Context, 8th Edition, 2015, Middlecamp et al., McGraw-Hill. You can purchase it or rent it together with the Connect Code from NIU bookstore. Alternatively, you can buy an e-book and Connect Code (the bundle is called Connect Plus) from the publisher directly. Or you can purchase the Connect Code from the publisher (when you access Blackboard HW or quiz) and the book elsewhere.

Office Hours:

Thurs. 9:30 - 10:45 A.M. During these times you can find me in my office (LT425). You are welcome to come by for help during office hours without an appointment. If you are unable to come during these times, you can make an appointment with me for another time that is convenient for both of us. You are also encouraged to contact me by e-mail and by phone during normal business hours.

Other resources:

The course website (<http://webcourses.niu.edu>) will feature important announcements, suggested discussion topics, practice exams, current exams and keys, and lecture powerpoint slides for downloading. Check the site periodically. You will need your student Z-ID to log in.

For further help, names of personal tutors are available from Linda Davis in FR 319 (the department office).

Your success as a student is of utmost importance to me. If you have a disability or any other special circumstance that may have some impact on your work in this class, and for which you may require exam and/or other types of accommodations, please contact me as soon as possible so that appropriate accommodations can be made. Please feel free to contact me by phone or to schedule an appointment.

The NIU Disability Resource Center (753-1303), located on the fourth floor of the University Health Service, is the designated office on campus to provide services and accommodations to all students with diagnosed disabilities. You will need to provide documentation of your disability to this office.

General Education Course Objectives

- Improve ability to think critically and logically;
- Improve ability to reason quantitatively and to perform basic chemical computations;
- Learn how to use the scientific method and theories to understand chemical phenomena;
- Develop an appreciation for the importance of the role of chemistry in everyday life;
- Develop an understanding of the historical development of the field of chemistry.

Content Objectives of This Course

- Distinguish between chemical, physical, and nuclear processes and properties of matter;
- Understand the acid/base properties of chemical compounds and the role of acids/bases in industrial, environmental, and health/nutritional applications;
- Identify the advantages and disadvantages of alternative energy sources vs. fossil fuels;
- Understand the role of chemistry in health care, pharmaceuticals, and nutrition;
- Become knowledgeable about the application of modern materials.

The following is from NIU policies:

Academic Integrity: Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious

offense. Students are considered to have cheated if they copy the work of another during an examination or turn in a paper or an assignment written, in whole or in part, by someone else. Students are responsible for plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging those sources or if they paraphrase ideas from such sources without acknowledging them. Students responsible for, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university.

A faculty member has original jurisdiction over any instances of academic misconduct that occur in a course which the faculty member is teaching. The student shall be given the opportunity to resolve the matter in meetings with the faculty member and the department chair. If the facts of the incident are not disputed by the student, the faculty member may elect to resolve the matter at that level by levying a sanction no greater than an F for that course. The faculty member shall notify the student in writing whenever such action is taken, and the [Office of Community Standards and Student Conduct](#) shall receive a copy of the Academic Misconduct Incident Report indicating final disposition of the case, which will be placed in the student's judicial file. In all matters where the charge of academic misconduct is disputed by the student or if the faculty member feels a sanction greater than an F in the course is appropriate (such as repeated offenses or flagrant violations), the faculty member shall refer the matter to the Office of Community Standards and Student Conduct making use of the Academic Misconduct Incident Report. Additional sanctions greater than an F in a course can be levied only through the University Judicial System. With regards to finding the student either responsible or not responsible for his or her action, the ruling of the Judicial Hearing Board shall be binding. In cases where there is either a finding of responsibility or an admission of responsibility by the student, any recommendations by the hearing board regarding the course grade are non-binding on the instructor, who remains solely responsible for assigning a course grade, consistent with the policies set forth in the course syllabus.

Attendance: The university does not use a "cut" system. Each instructor decides whether to excuse class absences and determines how to permit make-up work.

If a student will be absent from classes for a week or more because of an accident, illness, or other emergency, instructors will be notified of the absence only if students or their parents request it through the Division of Student Affairs. [Health Services](#) will not release information about students unless they provide a written request.

Leaves of absence will be granted for volunteer services related to disaster relief in accordance with applicable Illinois statutes or executive orders issued by the State of Illinois in response to emergency situations. To initiate a leave of absence, students should contact their College Dean's office, or the vice provost (or the vice provost's delegate) for any student who has no college affiliation. Following the period of volunteer service, Registration and Records will facilitate reenrollment of the student.

Students are expected to comply with each individual instructor's established attendance policy. It is recommended that students avoid registering for classes in which they would amass significant absences. In the case of an absence due to required attendance at a university-sponsored event such as a department trip, performing arts activity, ROTC function, or athletic competition, reasonable attempts shall be made by faculty members to allow the student to make up missed work. Students are responsible for completing the work assigned and/or due on the days they are absent for university-sponsored events. Both the sponsoring unit and the student should inform the faculty member as soon as possible in the semester in order for arrangements to be made for completing missed assignments, examinations or other required course work. The student is required to provide each instructor with an official notification in advance of the absence (e.g., a letter from the chair of the sponsoring department, the head of the sponsoring unit, or the coach).

Accommodations for Students with Disabilities: A student who believes that reasonable accommodations with respect to course work or other academic requirements may be appropriate in consideration of a disability must (1) provide the required verification of the disability to the Disabilities Resource Center, (2) meet with the Disabilities Resource Center to determine appropriate accommodations, and (3) inform the faculty in charge of the academic activity of the need for accommodation. Students are encouraged to inform the faculty of their requests for accommodations as early as possible in the semester, but must make the requests in a timely enough manner for accommodations to be appropriately considered and reviewed by the university. If contacted by the faculty member, the staff of the Disabilities Resource Center will provide advice about accommodations that may be indicated in the particular case. Students who make requests for reasonable accommodations are expected to follow the policies and procedures of the Disabilities Resource Center in this process, including but not limited to the Student Handbook.

A wide range of services can be obtained by students with disabilities, including housing, transportation, adaptation of printed materials, and advocacy with faculty and staff. Students with disabilities who need such services or want more information should contact the Disabilities Resource Center at 815-753-1303.