



CHEM 102: Summer 2014
Loyola University Chicago

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Office Hours: Mon & Wed, 10:00 a.m. – 11:00 a.m.

Lecture: Mon, Wed, & Fri, 1:00 p.m. – 3:40 p.m.; Flanner Hall 133 (FH-133)

Required Text: Chemistry – The Central Science, 12th Ed. By Brown, LeMay, Bursten, Murphy, and Woodward

Sakai: Course grades and other materials will be posted in Sakai. If you are unfamiliar with Sakai it is your responsibility to contact the instructor immediately.

Course Description

This course is a lecture, discussion and laboratory course and is a continuation of CHEM 101. Specific areas addressed are: properties of solutions, kinetics, equilibrium, chemical thermodynamics, and electrochemistry. Historical and current developments in chemistry as well as real-world problems that chemists address will be incorporated into the course.

The emphasis of this course is on understanding and prediction rather than memorization. This means that students must foster their problem solving skills, ability to make claims based on evidence, and effective communication of laboratory endeavors. It is not enough to know *what* happens in chemistry, the student must also be able to understand *why* it happens.

Exam Dates:

Friday, July 11 th , 2014	Mid-term Exam 1
Friday, July 18 th , 2014	Mid-term Exam 2
Friday, July 25 th , 2014	Mid-term Exam 3
Friday, August 1 st , 2014	Mid-term Exam 4
Friday, August 8 th , 2014	Final Exam

Exams and Grading

There will be 4 mid-term exams for which you will have 50 minutes to complete. The lowest of the 4 mid-term exam grades will be dropped. If you miss a mid-term exam, for any reason, that exam will count as your dropped exam. **No make-up exams will be given under any circumstances.** The final exam will be cumulative and you will have 2 hours to complete it. Exams begin promptly at 1:00 p.m. and there will be no extended time granted for students who show up late. Listed below is the total number of points available for this class.

Mastering Chemistry Homework	50 points
Mid-term Exams	300* points
<u>Final Exam</u>	<u>150 points</u>
Total	500 points

*lowest exam grade is dropped from final score

Calculators may be used during examinations, however, they may not be shared and their cases/covers must be removed. Cell phones may not be used as calculators and will not be permitted during examinations. All exams are closed note and closed book unless otherwise noted. Each exam MUST be signed and this signature will be taken as a statement of honest, independent work.

You must bring a form of photo identification, such as your Loyola student ID or a driver's license, with you to the exam. When you turn in your completed exam to the front of the room, you will be required to show your photo ID and sign an attendance sheet.

Exams will be graded and returned to you as quickly as possible. All answer sheets will be photo-copied and filed immediately upon completion of an exam. Any questions regarding the grading of your exam, points of clarification, and grading errors must be brought to the instructor's attention during office hours no later than one week after return of exam. No grading changes will be made a week after the exam is returned.

The grading scale used to determine letter grades is as follows:

A = 100-93; **A-** = 92-86; **B+** = 85-82; **B** = 81-78; **B-** = 77-72; **C+** = 73-70; **C** = 69-65; **C-** = 64-61; **D** = 60-52; **F** = <52

Mastering Chemistry Homework

There will be Mastering Chemistry homework sets each chapter that will be worth a total of 60 points. Only 50 of these 60 points will count towards your final grade. The maximum amount of points you can be rewarded towards your final grade is 50, any additional points earned will not be counted as extra credit. Each week there will be an assignment available online Monday after class that will be due the following Sunday by 11:59 p.m. The course ID is *kisselchem102Sum14*

Office Hours

My office door will be open during the times listed above. Please use this time to address any additional questions regarding this course. If you are unavailable to meet at the listed times, please feel free to email me any questions or set up an appointment by email. I will try to respond your emails as soon as I receive them, however, if you email me after 6:00 p.m. during the week, on the weekends, or during holiday breaks, I will respond to your email within 12 hours.

Practices for Success

Supporting claims with evidence, making applications, solving and analyzing problems, and using chemical principles to explain phenomena are critical skills in the field of chemistry. The development of these skills is not without some frustration, but it carries the reward of deepening one's ability to think critically and solve problems in any field. The use of targeted, guiding questions, regularly scheduled work, and strategic study plans can greatly assist the learning of chemistry. With such a focus, hopefully any frustration will quickly turn to appreciation and fascination for the relevance and connectedness of chemistry in your life and within the world around you. Solving and analyzing problems is the most important feature of this work. If, at any time, you need assistance framing such plans for your work in chemistry, please do not hesitate to ask the instructor.

Norms of Course Proceedings

The classroom is to be a safe place to question and explore ideas. Student and teacher voices are important to this work. Collegial disagreement can be a healthy part of this process, but must always include respect for all members of the class.

Course activities will be designed to help students reach the goal of learning chemistry content and developing critical thinking skills. This will more often be driven by the use of data and reasoning to discover concepts and solutions rather than the identification and exchange of chemical facts and algorithms.

Students are expected to read individually on their own time outside of class. Any material covered in the text that is not covered in class may still be used for examinations.

Class sessions will begin and end on time. All students should attend class regularly and participate in class discussions. Absences could affect one's ability to learn chemistry during this session. Anticipated absences should be discussed with the instructor two class days before the absence. Proper documents may be requested to verify the reason for any absence. No make-up exams will be granted for any absence during an exam day, no matter what the excuse

Class will start with a 50 minute lecture followed by a 10 minute break. The second portion of the class will start with a 30 minute discussion during which sample problems will be worked and students will be allowed to ask questions and participate in group discussions regarding the course material being covered. Another 10 minute break will be granted after this discussion session. The final 60 minutes of class will be used for lecture.

Tutoring

The tutoring Center at the university offers free tutoring to students. To see the complete tutoring schedule and find additional information, visit the Tutoring Center webpage at www.luc.edu/tutoring

Academic Honesty

Academic honesty is an expression of interpersonal justice, responsibility and care, applicable to Loyola University faculty, students, and staff, which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. The School of Education's Policy on Academic Integrity can be found at: http://www.luc.edu/education/academics_policies_integrity.shtml. For additional academic policies and procedures refer to: http://www.luc.edu/education/academics_policies_main.shtml

Accessibility

Students who have disabilities which they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: <http://www.luc.edu/sswd/>

Harassment (Bias Reporting)

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting/>

July [2014]

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	30 CHAPTER 11 Liquids and Intermolecular Forces	1 1 st Day of July	2 CHAPTER 13 Properties of Solutions	3	4 NO CLASS 4 th of July Holiday	5	6
	7 CHAPTER 13/14 Properties of Solutions/ Chemical Kinetics	8	9 EXAM 1 CHAPTER 14 Exam 1 will cover Ch. 11 & 13 Chemical Kinetics	10	11 CHAPTER 14 Chemical Kinetics	12	13
Week 2	14 CHAPTER 15 Chemical Equilibrium	15	16 CHAPTER 15/16 Chemical Equilibrium	17	18 EXAM 2 CHAPTER 16 Exam 2 will cover Ch. 14, & 15 Acid-Base Equilibria		20
	21 CHAPTER 16/17 Acid-Base and Additional Aqueous Equilibria	22	23 CHAPTER 17 Additional Aqueous Equilibria	24	25 EXAM 3 CHAPTER 19 Exam 3 will cover Ch. 16 & 17 Chemical Thermodynamics	26	27
Week 3	28 CHAPTER 19 Chemical Thermodynamics	29	30 CHAPTER 19/20 Chemical Thermodynamics/ Electrochemistry	31 End of July	1 EXAM 4 CHAPTER 20 Exam 4 will cover Ch. 19 & 20 Electrochemistry	2	3
	4 CHAPTER 20/21 Electrochemistry/ Nuclear Chemistry	5	6 CHAPTER 21 Nuclear Chemistry	7	8 FINAL EXAM CHAPTER 23 Final Exam Transition Metals and Coordination Chemistry	9	10
Week 4							