

Syllabus
Physiological Chemistry
CHE-115-002 SC308 TR 4:30-5:45
Spring 2007

Instructor: Dr. PJ Ball

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Office Hours: M: 11:00-1:00; TR: 11-12, 3:30-4:30; open door policy and others by appointment

Required Materials:

Text: Introduction to General, Organic, and Biochemistry, 8th ed. Bettelheim, Brown, Campbell, and Farrell, Brooks/Cole, 2007.

Calculator: Each student will need a calculator that can perform simple mathematical functions. Cell phones may not be used for calculators.

Blackboard: Each student must be able to access the Blackboard site for this course.

Announcements, quizzes, handouts, study guides, answer keys, and course notes will be posted on blackboard

Course Description:

This course is intended for non-science majors, particularly those desiring careers in nursing and allied health-care fields. This course fulfills the general education science requirement. The basic principles of general, organic, and biological chemistry are covered with an emphasis on chemical reactions and concepts related to physiological processes and other phenomena of everyday interest.

Learning Outcomes:

Upon completion of this course, the student will:

- Become familiar with the basic concepts of general chemistry
- Recognize and name organic molecules and predict their physical and chemical properties
- Become aware of the relationship of chemistry to a variety of topics such as health, disease, nutrition and the environment

Prerequisite:

High School Chemistry or CHE 105 or equivalent

CHE 115L is a corequisite for this course. If you withdraw from lecture you must also withdraw from the lab.

Note: It is assumed in this course that you understand the concepts covered in Chapters 1 and 2 of your text book, as well as most of the information in Chapters 4 and 5. It is very important that you understand the material presented in these chapters as it lays a foundation for the rest of the topics that will be covered in this course. It is your responsibility to seek assistance if you are not comfortable with these topics. Please know that I am always happy to meet with you.

Tests:

There will be four tests during the semester and a final exam. The dates are listed on the attached schedule. There will be no make up tests. If you miss one test, the exam will count for an additional 20% of your grade. If you miss more than one test, you will receive a zero for each test missed beyond the first test. If a student takes all four exams, at the end of the semester I will

replace the lowest exam grade with the final exam grade. I will do this only if it is beneficial to your grade (i.e. your final exam score is higher than your lowest test score).

Quizzes/ Assignments:

All quizzes will be announced and provided via Blackboard. Students are expected and bound by the University Honor Code to take the quizzes on their own. Pop-in and out of class assignments may be also given during class.

Study Guides: Study Guides for each chapter are provided via blackboard. Chemistry is a problem based course. In order to fully grasp the material you must work problems. The best way to do well on the exams is to complete the study guide exercises and end-of-chapter problems. I am always more than happy to answer any questions you may have about these problems/exercises.

Supplemental Instruction (SI):

Supplemental Instruction is offered for this course. SI is an extra service that is provided to help you succeed in this course. SI sessions are held three times a week and are led by a student who has previously taken this same course and done very well. The SI leader will provide worksheets and activities to allow you to practice and apply the concepts studied in lecture. It is not required that you attend these sessions. However I strongly encourage you to attend one session a week. In the past students who have attended SI sessions have done considerably better than those who do not attend. The SI session times and locations are posted on Blackboard.

Grading:

Tests = 65%

Quizzes/Assignments = 15%

Final Exam = 20 % (The final exam will be comprehensive)

A = 90-100

B = 80-89

C = 70-79

D = 60-69

F = 0-59

Other Important Information and Policies of the Department of Chemistry at Northern Kentucky University:

- All items on the syllabus are subject to change at the discretion of the instructor
- Students are responsible for reading and understanding the syllabus. Any items that are not understood need to be brought to the attention of the instructor within the first two weeks of the semester
- The work that you 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 Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.
- Cheating will not be tolerated. Faculty members have the right to determine actions to be taken when a student is caught cheating.
- Please see blackboard for information concerning disability services and the learning assistance program

Note: Please turn off cellular phones during class. If you expect an emergency call please notify me before class begins. Use of a cellular phone during a test is considered cheating.

Course Schedule

<u>Date</u>	<u>Lecture</u>	<u>Text Sections</u>
1/9	Introduction/Chapter 1	1.1,1.3-1.6, handouts
1/11	Chapter 2: Atoms & The Periodic Table	2.1-2.7 ^a
1/16	Chapter 4: Bonding	4.1-4.8, 4.11
1/18	Chapter 4: Bonding	
1/23	Chapter 5 Chemical Reactions	5.1-5.5A,5.6-5.8
1/25	Chapter 5: Chemical Reactions	
1/30	Chapter 5: Chemical Reactions	
2/1	Test 1 Chapters 1,2,4,5	
2/6	Chapter 6: Gases, Liquids, Solids	6.1-6.4 ^b , 6.5-6.8
2/8	Chapter 6: Gases, Liquids, Solids	
2/13	Chapter 7: Solutions	7.1-7.4,7.5A,B,7.6,7.8B
2/15	Chapter 7: Solutions	
2/20	Chapter 8: Reaction Rates and Equilibrium	8.2-8.8
2/22	Chapter 9: Acids/Bases	9.1-9.8,9.10
2/27	Chapter 9: Acids/Bases	
3/1	Test 2 Chapters 6-9	
3/5-9	Spring Break	
3/13	Chapter 3: Nuclear Chemistry	3.1,3.2,3.3 ^c ,3.4,3.5,3.7
3/15	Chapter 10: Organic Chemistry	10.1-10.4
3/20	Chapter 11: Alkanes	11.1-11.8, handout
3/22	Chapter 12: Alkenes	12.1-12.3,12.6

3/27	Chapter 13: Benzene	13.1-13.4
3/29	Test 3 Chapters 3, 10-13	
4/3	Chapter 14: Alcohols	14.1-14.5
4/5	Chapter 16: Amines	16.1-16.5
4/10	Chapter 17: Aldehydes & Ketones	17.1-17.4
4/12	Chapter 18: Carboxylic Acids	18.1-18.5
	Chapter 19: Anhydrides, Esters, Amides	19.1-19.5
4/17	Chapter 24 Chemical Communications	24.1-24.7 (emphasis on lecture notes)
4/19	Test 4 Chapter 14-19	
4/24	Chapter 24 Chemical Communications	
4/26	Chapter 24 Chemical Communications	

FINAL EXAM: Thursday May 3, 2007

*****This schedule is subject to change at the discretion of the instructor*****

^aSection 2.6 of the text gives a more in-depth explanation of electron configuration than you will be responsible for in this course. You will only be responsible for the material covered in lecture.

^bIn Section 6.4 we will not cover the Ideal Gas Law

^cIn Section 3.3 you will not be responsible for Balancing Nuclear Equations

^dChapter 24 contains a great deal of information that we will discuss very briefly. You will only be responsible for the material summarized in lecture.