CHEM 106: General Chemistry 2 Course Syllabus
(Spring 2010, Section 002)

Course Specifics:

Instructor: Dr. Jason C. Hurlbert
Office: Sims 301B
Office hours: MWF 11-12 and by appointment
Phone: 323-4928
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Meeting Times:
Lecture: Tuesday and Thursday, 9:30 - 10:45AM, Sims 105
3 credit hours

Textbooks: Chemical Principles, 4th ed., Atkins and Jones
Biochemistry, 6th ed., Campbell and Farrell

Course Outline and Objectives:

We will cover the following topics during the semester:

* Chemical concepts as they relate to biological systems
* Chemical Reactivity
* Intermolecular forces
* The chemistry of the essential molecules for life: lipids, amino acids and sugars
    - Specifically: How these molecules are made, how they react and how they interact with other molecules found in the cell.
* Molecular Biology (The relationship between biology and chemistry)
* Enzymology
* Metabolic pathways and the chemistry behind them

Along the way, I hope to show you how important the field of chemistry is in everyday life. We will spend the initial part of the course firming up material covered in General Chemistry I, then move into the chemical basis for many biological processes, and finish by studying specific metabolic pathways from a chemical point of view. In addition, the course will serve to help build your critical thinking skills and develop effective study habits, traits you'll need regardless of your chosen career goals.

In order to be successful in this class, you'll need to do the following:

1) Consult the course website often, especially the 'Updates' page to make certain you won't miss anything.
2) Attend every lecture. (See attendance policy below)
3) Download and print the lecture notes from the course website BEFORE coming to lecture.
4) Read the material under discussion for the day BEFORE attending lecture.

5) Perform the problems given in the Class Schedule immediately after the lecture covering the material.
6) Attempt every bonus problem given.

General Education Requirements

General Education Requirements: CHEM106 and the co-requisite CHEM108 together fulfill four hours of general education requirement for natural sciences. Listed below are Winthrop's seven fundamental student learning outcomes for natural science courses as well as examples of how they will be fulfilled in CHEM106 and 108.

Students should be:
1. Conversant with a few fundamental concepts from among the three main areas of natural science, including earth, life, and physical sciences. (e.g., the behaviour of inorganic molecules, the underlying thermodynamic principles dictating the interaction of molecules and the chemical processes by which organisms exist).
2. Able to apply the scientific methodologies of inquiry. (e.g., CHEM 108 laboratory exercises and experiments)
3. Able to discuss the strengths and limitations of science. (e.g., the relationship between protein structure and function, protein folding)
4. Able to demonstrate an understanding of the history of scientific discovery. (historical perspectives on the discovery and characterization of the basic, biologically required molecules)
5. Able to discuss the social and ethical contexts within which science operates. (e.g., biotechnology).
6. Able to communicate about scientific subjects including (lab courses only) the defense of conclusions based on one's own observations. (e.g., CHEM 108 laboratory presentations and project reports)
7. Able to discuss the application of scientific knowledge to the social sciences and to non-scientific disciplines. (the entire course does this)

Grading for the Course

Homework:
Assigned homework problems are given in the course calendar. These homework problems will be collected on the dates indicated. Please feel free to work in groups on these problems. However, make sure that you understand how these problems are solved as you may be required to present the solutions to the class during the recitation sections.

Quizzes:
Three quizzes will be given during the semester during the recitation section. These quizzes will be 70 minutes in duration and will be worth 40 points each. Be prepared! Bonus quizzes may spontaneously appear at any time and the points from these quizzes will be added to your point total for the course.

Tests:

Test 1 (February 4)
Test 2 (March 4)
Test 3 (April 20)
• Each test will have a value of 100 points

Final Exam – Wednesday, April 28, ***8:00AM***
The final exam is cumulative and you must make at least a 50% on the exam to pass the course.
• The final exam will cover the entire course and will have a value of 200 points

Total Possible Points
120 points: Quizzes: 3 @ 40 points each
300 points: Tests: 3 @ 100 points each
200 points: Final Exam
200 points: Homework: 4 problem sets @ 50 points each
820 Total possible points for the course

Grades:

A: 90 - 100% (738-820 pts)
B+: 86 - 89% (705-737 pts)
B: 77 - 85% (631-704 pts)
C+: 74 - 76% (533-630 pts)
C: 66 - 73% (541-532 pts)
D: 56 - 65% (459-540 pts)
F: <55% (<458 pts)

Student code of conduct statement: As noted in the Student Conduct Code: "Responsibility for good conduct rests with students as adult individuals."

CHEM 108 Corequisite

Since the CHEM 106/108 combination represents a General Education requirement, CHEM108 must be completed and passed in order to receive a final grade in CHEM106. Students who do not pass CHEM108 will receive an incomplete in CHEM106 until CHEM108 has been passed.

Technology in the Classroom

Out of respect for everyone in the room, please turn your cellular telephones to 'Silent' and (if applicable) mute your laptop computers. Also, laptop computers may only be used for taking notes during the class period, not updating your Facebook page, checking email, tweeting, etc. Due to the complex nature of many of the subjects discussed during lecture and the frequent use of graphs and figures, it is the instructor's opinion that the best way to take notes is by hand. Students failing to adhere to these rules may be asked to leave should their behavior prove disruptive to the class. No telephones or laptops

may be used during exams or quizzes. You will need to bring a scientific calculator to class for quizzes and exams.

Course Attendance Policy

Attendance will not be taken, however you must attend every lecture in order to be successful in the course. During lecture, I will go over specific examples that are not found in the textbook or the online lecture notes. I will also announce opportunities for extra credit and give pop quizzes during scheduled lecture. Failure to attend without authorized documentation (eg. Physician's note or court document) or prior approval from the instructor will prevent you from taking part in these opportunities.

Syllabus Change Policy

Should any changes be made to this document, the Updates page on the course website will note the changes, they will be announced in class and everyone will be encouraged to download the latest copy of the document.

Students with Disabilities

Winthrop University is dedicated to providing access to education. If you have a disability and require specific accommodations to complete this course, contact Services for Students with Disabilities, at 323-3290. Once you have your official notice of accommodations from Services for Students with Disabilities, please inform me as early as possible in the semester.