

Chemistry 108
Fundamentals of Chemistry
Spring 2006

Instructor: Professor Stephen Dunham
Office: 214 Collier Hall of Science, 610-861-7103
Email: stephendunham@moravian.edu

Lecture: M,W, F 10:20-11:10, 204 Collier
Problem: R 10:20-11:10, 202 Collier
Session

Labs: M or T 12:45-3:45, 211 Collier

Office Hrs: T, F 11:20-12:20, or by appointment

Required Materials:

Text: General, Organic, and Biochemistry, 1st Edition by Kenneth W. Raymond (2006), John Wiley & Sons.

Calculator: Must be able to calculate logarithms

Black Board Web Site: <http://blackboard.moravian.edu/>

You must enroll in my Chemistry 108 blackboard site.

Throughout the semester, laboratory procedures, problem sets, pertinent links, reminders and other material will be posted to the course blackboard page. Please access this early and often!

Optional Materials:

Ancillaries: Student Study Guide & Solutions Manual by Byron Howell
Math Survival Guide: Tips and Tricks for Science Students, 2nd Edition by Jean Richardson.

Lab Goggles: Safety Goggles will be provided in the laboratory to be shared between lab sections. If you would like to have your own pair, they are available in the bookstore.

Course Goals:

- Recognize relationships between physical properties of atoms, compounds, and molecules; and the organization of elements in the periodic table, physical states of matter, solubility, reactivity, molecular shape, and biochemical function.
- Apply qualitative and quantitative aspects of chemistry to problem solving
- Be able to read scientific reference materials to learn useful information about chemicals and pharmaceuticals.
- Use the scientific method to actively seek knowledge through the study of chemical processes in a controlled environment.
- Use real-life examples, particularly those that are health related, to illustrate the relationship between chemical principles and living organisms.

Attendance: Obviously, it will be very difficult for you to learn chemistry concepts and follow them over the semester if you miss course meetings (class, problem sessions, and laboratories). As a reminder, the college policy on attendance can be found at <http://www.moravian.edu/studentLife/handbook/academic.htm> . If you anticipate an unavoidable absence, please notify me ASAP before you are absent. Makeup quizzes, exams, and labs are given at the discretion of the instructor.

Academic Honesty: Please be familiar with the college policy on academic honesty (<http://www.moravian.edu/studentLife/handbook/academic2.htm>). Because this course involves small group learning activities, each student may exchange experimental details and data with her/his lab partner and classmates. However, any work submitted in your name is to be your work alone. You are encouraged to discuss work with others on assignments and labs, but merely copying answers is not acceptable.

Learning Differences: Students should contact the Office of Learning Services for disclosure of a learning difference and to request appropriate accommodations.

Grading: You are not in competition with anyone else in this class. Your grade will be determined only by the percentage of the total points you achieve. In the event that the class average on any exam, quiz, or lab falls below 75%, that score will be curved so that the class average is 75%.

Percentage Based Grading Scale

97-100	A+	73-76	C
93-96	A	70-72	C-
90-92	A-	67-69	D+
87-89	B+	63-66	D
83-86	B	60-62	D-
80-82	B-	< 60	F
77-79	C+		

There are a total of 1000 pts that will be factored into your final grade in this course. A point on an exam, quiz, or laboratory counts the same amount.

Exams	600 pts
Quizzes	150 pts
<u>Labs</u>	<u>250 pts</u>
Total	1000 pts

Exams: Three in-class exams (150 pts each) and one final (150 pts).

While the material you will be responsible for on each exam could vary, (dependent upon the pace of the course) the following dates will be used for examinations:

Exam 1	Friday, February 10
Exam 2	Friday, March 17
Exam 3	Friday, April 21
Final	TBA

Quizzes: Every Monday, a quiz (15 pts each, 12 quizzes per semester) will be given on the previous lecture material. Your lowest two quiz scores will be dropped at the end of the term. These quizzes are designed to keep you up with the content of the course, and they will give you a chance to practice the types of problems you will see on the exams.

Labs: Thirteen laboratory sessions (25 pts each) will include assignments to be handed in and/or short response papers that are handed in for grading. The lowest three lab grades will be dropped at the end of the term.

Makeup Exams, Quizzes, and Labs: Missed quizzes and labs will be counted as one of the “dropped” scores (see grading section above). You are responsible for understanding the content of the material covered during a missed quiz or lab. Makeup exams will be given at the discretion of the instructor for absences that have been documented by the Dean of Students Office and/or a health professional.

Class Participation: When you have a question during class, it is likely that your neighbor does as well. Please stop me and ask. Nearly all concepts in this course will build upon each other, and this requires you to understand the material in previous lectures to build a bridge to the new material we will be learning.

If you have questions that are not answered in class, you can start a forum on the discussion board at the **Blackboard** web site, come to my office hours, email, or schedule an appointment.

- Read lecture materials and lab handouts before coming to class.
- Turn off cell phones, pagers, etc. NO-text messaging
- Sit in the front four rows of the classroom to facilitate discussion

Pace of the Course: The schedule below is a guideline for the course coverage this semester. Check the **Blackboard** web site for an updated reading list for each week.

Week	Beginning	Anticipated Text Coverage	
Jan	16	Ch # 1,2	Science and Measurements, Atoms and Elements
Jan	23	Ch # 2,3	Atoms and Elements, Compounds
Jan	30	Ch # 4	An Intro to Organic Compounds
Feb	6	Ch # 5	Gases, Liquids, and Solids, <u>Exam #1 CH 1-4</u>
Feb	13	Ch # 6	Reactions
Feb	20	Ch # 7	Solutions, Colloids, and Suspensions
Feb	27	Ch # 8	Lipids and Membranes
Mar	6	SPRING BREAK	
Mar	13	Ch # 9	Acids, Bases, and Equilibrium
Mar	20	Ch # 10, 11	Carboxylic acids, Phenols, and Amines Alcohols, Ethers, Aldehydes, and Ketones <u>Exam #2, CH 5-9</u>
April	3	Ch # 12	Carbohydrates
April	10	Ch # 13	Peptides, Proteins, and Enzymes
April	17	Ch # 14	Nucleic Acids
April	24	Ch # 15	Metabolism
May	1		Final Exam, <u>CH 10-15, and Cumulative CH1-9</u>