

# CHEM 1151K FALL 2007

## GENERAL COURSE INFORMATION AND POLICIES

**Instructor:** Lucille B. Garmon, Ph. D., Professor of Chemistry

**Office:** TLC 2132

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**Office Hours:** 9:00 - 6:00 MWF, 1:00 - 6:00 TR, or by appointment.

**Office Phone:** 678-839-6017

### Required Materials for Course

**Text:** General, Organic, and Biochemistry: Structures of Life (2nd edition) by Karen Timberlake. Pearson/Benjamin Cummings, 2007. ISBN 0-8053-2185-3

**Scantron Sheets:** Four (4) of Form No. 229629 (red), one for each test. (Not required for final.)

### Optional Materials for Course

**Study Guide:** Study Guide/with Selected Solutions to accompany the text (ISBN 0-8053-4883-2).

### Course Content

In this course you will get an introduction to basic general chemistry and a start on organic chemistry. There will be emphasis on applications to human physiology. Topics include composition of matter, measurements, structure of atoms and molecules, bonding, chemical reactions, states of matter and gas laws, water and aqueous solutions, acids and bases, chemical equilibria, reaction rates, nuclear structure and radioisotopes, and the structure and nomenclature of hydrocarbons.

### Course Goals

This course will provide you with an understanding of the basic concepts of chemistry as given above, an awareness of the role of general chemistry in everyday life and particularly in human physiology, and improve your ability to communicate scientific ideas.

### Course Structure:

The course material and test schedule are given on the reverse side of this sheet. The twice-a-week class periods will be used for appropriate laboratory and skill development activities as well as for lecture presentations. Workshops (CHEM 1000) will supplement class lectures by providing opportunity for small-group discussion and collaborative learning.

### Attendance Policies

**General:** Attendance will be noted. Anyone absent without notice for two consecutive class days, including the first two class days, is subject to being dropped. NOTE: STUDENTS WHO HAVE DECIDED TO WITHDRAW ARE RESPONSIBLE FOR TAKING NEEDED ACTION. The deadline this semester for withdrawing with a W is Oct. 8.

**On days when there is a laboratory activity:** Unexcused absences from laboratory result in a grade of zero for that activity. Excused absences may, at the discretion of the instructor, either be made up or dropped when figuring the overall laboratory average.

**On test days:** Students who anticipate being absent from a test for a legitimate reason will be allowed to take the test at a time mutually agreeable to student and instructor, but no more than one class day before or after the normally scheduled test date. Students missing a test for an unanticipated excusable reason (illness, accident) which involves more extended absence from class may make up the missed test by having the portion of the final examination covering that material count double. In either case, documentation of the reason for the absence must be supplied. Unexcused absences on test days result in a grade of zero for that test.

**Cut policy:** Three unexcused absences (cuts) from class (not counting test days) are allowed during the quarter. One additional cut is allowed for each test grade of 80 or above, and two additional cuts are allowed for each test grade of 90 or above. Overcutting may result in a grade of **W** or **WF** (depending on date) being sent to the Registrar's Office.

### Grading Policies

The following factors will be considered in determining your overall grade in CHEM 1151K.

**Test average (T):** 40 to 55%    **Laboratory activity average (L):** 20%    **Final exam (F):** 20 to 25%

**Homework average (HW):** 0 to 5 %    **Workshop average (WS):** 15%

**Grade determination:** OA (overall average) = (%\*T + %\*L + %\*F + %\*HW + %\*WS)/100%

OA	90 Ⓢ OA	80 Ⓢ OA < 90	70 Ⓢ OA < 80	60 Ⓢ OA < 70	OA < 60
Grade	A	B	C	D	F

(over)

DATE	Tuesday	Thursday
Week #1 Aug. 16		Intro to Course Chpt.. 1 - Meas.; Sci. Not'n; Sig. Fig.; SI Units
Week #2 Aug. 21 - 23	Chpt.. 1 - Dimensional. Analysis; Density; Temperature	Chpt. 2 - Elements and Symbols; Periodic Table
Week #3 Aug. 28 - 30	Chpt. 2 - Atoms and Isotopes;	Chpt. 3 - Radioactivity and Nuclear Equations
Week #4 Sept. 4 - 6	Chpt. 3 - Radiation Measurement; Half Lives	Chpt. 3 Applications of Radioactivity
Week #5 Sept. 11 - 13	<b>TEST #1</b>	Chpt. 4 - Ions and Ionic Compounds Naming and Writing Formulas
Week #6 Sept. 18 - 20	Chpt. 4 - Covalent Bonds; Names and Formulas of Molecular Compounds	Chpt 4 - Polarity and Polar Molecules Chpt. 5 - Chemical Equations; Types of Rxns
Week #7 Sept. 25 - 27	Chpt. 5 - Moles and Mole Relationships; Mass Calculations with Moles	Chpt. 5 - Basic Stoichiometry Chpt 6 - Energy in Chemical Reactions
Week #8 Oct. 2 - 4	Chpt. 6 - Calories in the Laboratory and in Nutrition	Chpt. 6 - States of Matter; Interatomic Forces; Phase Changes
Week #9 Oct 9	<b>TEST #2</b>	<b>FALL BREAK</b>
Week #10 Oct. 16 - 18	Chpt. 7 - Theory of Gases; Gas Laws with Pressure, Temperature, Volume	Chpt. 7 - Gas Laws with Moles; Partial Pressures of Gases
Week #11 Oct. 23 - 25	Chpt. 8 - Water and Solutions; Solubility	Chpt. 8 - Concentration Measurements; Osmosis and Dialysis
Week #12 O. 30 - N. 1	Chpt. 9 - Reaction Rates; Equilibria and Equilibrium Constants	Chpt. 9 - Equilibrium Calculations; Le Chatelier's Principle
Week #13 Nov. 6 - 8	<b>TEST #3</b>	Chpt. 10 - Strong and Weak Acids and Bases; Ionization Constants; pH
Week #14 Nov. 13 - 15	Chpt. 10 - Acid-Base Reactions; Salts; Buffers; Titrations	Chpt. 11 - Introduction to Organic Chemistry Alkane Structure and Nomenclature
Week #15 Nov. 20	Chpt. 11 - Alkane Properties and Reactions; Functional Groups	<b>THANKSGIVING HOLIDAY</b>
Week #16 Nov. 27 - 29	Chpt. 12 - Alkene-Alkyne Struc & Nomenclature; <i>Cis-trans</i> - Isomerism;	Chpt. 12 - Reactions of Alkenes and Alkynes Aromatic Compounds
Week #17 Dec. 4	<b>TEST #4</b>	<b>COMPREHENSIVE FINAL 8:00 AM, DEC 13</b>