Chemistry and Man
CHEM 100B

Instructor: Professor M. Reese
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Textbook: Conceptual Chemistry by John Suchocki
Multimedia: Conceptual Chemistry Alive! Computer DVD
Prerequisite: MATH 25 and ENG 22 with a grade of C or better

A brief introduction to basic principles of chemistry and their relationship to the modern world. This course provides a general education core course for the non-science major. Emphasis will be placed on how science and technology affect the individual, society and the environment. Topics to be treated include: air and water pollution, energy resources, and basics of biochemistry. This is a lab- oriented course in which students are encouraged to learn by doing.

The class covers chapters 1 - 11 on the text Conceptual Chemistry by Sucjhocki, though some changes to content and order may be made.

Class meets for 3 hours of lecture and 3 hours of lab per week. (DP)

Course Goals

Upon completion of Chem 100B the student should be able to do the following at a minimum of 70% proficiency:

1. Describe the development and history of chemistry.
2. Apply the conceptual model of the atom to describe the properties and behavior of matter.
3. Describe the existence of different types of forces between atoms and ions.
4. Utilize the concepts of the Kinetic Molecular Theory to explain the existence and behavior the three states of matter.
5. Apply the concepts of reaction theory to explain the rates of chemical reactions and the phenomenon of chemical equilibrium.
6. Describe acids and bases, acid-base reactions, and the process of oxidation-reduction.
7. Distinguish between nuclear and chemical reactions.
8. Apply the concepts of the structural theory of organic chemistry to explain the existence and behavior of the different classes of organic and bio-organic compounds.
9. Describe the impact of technology on soil, air, water quality and its resources.
10. Apply the standard methods of measurement, scientific observation, data treatment, and documentation in performing experiments on the properties of substances.

Class	Date	Topic	Lab
1	25-Aug	Intro	
2	27-Aug	CHAPTER - 1	Scientific Method
3	1-Sep	CHAPTER - 1	
4	3-Sep	CHAPTER - 2	Making Measurements
5	8-Sep	CHAPTER - 2	
6	10-Sep	CHAPTER - 2	Physical and Chemical Properties
7	15-Sep	CHAPTER - 3	
8	17-Sep	CHAPTER - 3	Percent Water in Popcorn
9	22-Sep	**Exam 1**	
10	24-Sep	CHAPTER - 4	Salt and Sand
11	29-Sep	CHAPTER - 4	
12	1-Oct	CHAPTER - 5	Brights Lights
13	6-Oct	CHAPTER - 5	
14	8-Oct	CHAPTER - 6	Electron Dot Structures
15	13-Oct	CHAPTER - 6	
16	15-Oct		Molecular Shapes
17	20-Oct	**Exam 2**	
18	22-Oct	CHAPTER - 7	Solutions
19	27-Oct	CHAPTER - 7	
20	29-Oct	CHAPTER - 8	Energy and Calorimetry
21	3-Nov	CHAPTER - 8	
22	5-Nov	CHAPTER - 9	Mystery Powders
23	10-Nov	CHAPTER - 9	
24	12-Nov		?
25	17-Nov	**Exam 3**	
26	19-Nov	CHAPTER - 10	Upset Stomach
27	24-Nov	CHAPTER - 10	
28	26-Nov	CHAPTER - 11	?
29	1-Dec	CHAPTER - 11	
30	3-Dec	Thanksgiving	
31	7-Dec	CHAPTER - 12	
32	10-Dec	CHAPTER - 12	Organic Molecules
	17-Dec	FINAL EXAM	9 - 11 am

Evaluation

There will a series of quizzes covering the material in each chapter or section studied, a mid-term exam, and a final exam. Laboratory experiments will be completed in class as well as at home. Other assignments may be given as needed.

General Information

It is your responsibility to be aware of the last day of the withdrawal period. Any student who does not complete the course, yet does not officially withdraw, will receive a grade of "F".

It is expected that you behave in a mature and dignified manner, consistent with the academic nature of this course.

The material assigned should be read before the lecture. The lecture should be used to review and clarify the material as well as discuss practical applications of the concepts presented in the text.

Student with Disabilities Statement

Leeward Community College abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, which stipulate that no student shall be denied the benefits of an education "solely by reason of a handicap." Students with documented disabilities who believe that they may need accommodations in this class are encouraged to contact the Coordinator of the KAKOʻO ʻIKE (KI) program as soon as possible to ensure that such accommodations are implemented in a timely fashion. The KI office is located in L-208, across from the elevator in the library building or call for information at 455-0421.