

Framingham State University

Syllabus

THE CHEMISTRY OF LIFE (CHEM 101)

General Information

Session: Summer 2018(July 2nd,2018-August 3rd,2018)

Credit:4

Teaching Hours: 50 Hours

Time:2 hours/day, Mon.-Fri.

Professor Name: Nan Chen

Home Institution: Framingham State University

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If you wish to speak to me outside the allotted office hours, please come by or make an appointment.

Catalog Description:

An exploration of the origin of life on a molecular basis; a familiarization with the basic chemistry of living organisms and their environment; an understanding of the laws that govern life; and a discussion on the fate of life as a consequence of drugs and man's chemical pollution of the earth's atmosphere, soil and water. Designed as a terminal non-laboratory course for the liberal arts non-science student.

Learning Objectives:

Upon successful completion of this course, students will be able to:

- The student will learn the elementary concepts of chemistry and be able to relate the use of chemistry in their everyday lives.
- The student will be introduced to the concepts of atoms, molecules, ions, solutions and chemical reactions and begin to understand the relevance of chemistry in important societal issues.
- Most importantly, the student will begin to learn to **think critically**.

Required Materials

- 21st Century Chemistry, Kimberley Waldron, 1st Ed., ISBN-13: 9781936221394.
- Scientific calculator

Lecture Reading Assignments: Lectures are designed to help you understand the emphasized material. To get the most out of lecture, please read the appropriate chapters before they are

discussed in class.

Homework Assignments: Assignments and their due dates will be given in class and posted on Blackboard and must be turned in by the start of the class when they are due. Assignments will be designed to reinforce concepts presented in class and provide individual exploration of topics of interest. ***Late assignments will not be accepted.***

Electronic Devices:

All electronic communication devices must be turned off during class time. You will not be allowed to use electronic devices during exams or quizzes (no cell phones calculators).

Attendance: Classes, Quizzes & Exams:

It is highly recommended that you make every effort to attend all classes, as the quizzes and the three one-hour exams are based solely on the lecture. No additional "credit" is given in this course.

Make-up quizzes or exams will only be permitted due ***to illness or family emergency.*** If you are unable to attend class on a quiz or exam day because of illness or emergency, you are expected to contact me ***before class*** by phone, WeChat or e-mail. Failure to notify me in one of these ways will result in you not receiving consideration for a make-up quiz or examination. A Doctor's note is required in case of an illness.

Academic Honesty:

Academic honesty is discussed in the FSU course catalog. Please note the following excerpt: "Plagiarism: claiming as one's own work the published or unpublished literal or paraphrased work of another. It should be recognized that plagiarism is not only academically dishonest but also illegal." You are responsible for turning in your **own** work. Plagiarism and cheating will not be tolerated in any form. If you cite or paraphrase someone else's work you must reference them.

Important Dates:

Last day to add or drop:	Wednesday July 4 th
Last day to withdrawal from course:	Tuesday July 24 th
Final Exam:	Thursday Aug. 2 nd

Exams:

Three one-hour exams will be given during the semester. A tentative exam schedule is provided below. ***Make-up exams will only be permitted due to illness or family emergency.***

Exam Schedule:	Hour Exam I	Monday, July 9 th
	Hour Exam II	Monday, July 16 th
	Hour Exam III	Monday, July 23 th

Final Exam:

The final exam will be comprehensive and accounts for 25 % of your final grade.

Final Exam: Thursday, August 2nd @ 3:20 PM

Grade Calculations:

Regular class attendance and completion of chapter readings are necessary to succeed in this course. Your final course grade will be calculated as follows:

Lecture Attendance and Participation	10%
Homework Assignments	14%
Exams (3)	36%
Cumulative Final Exam	25%
Presentation	15%

Grading Policy:

A:	(A- 90-92; A 93-100)
B:	(B- 80-82; B 83-87; B+ 88-89)
C:	(C- 70-72; C 73-77; C+ 78-79)
D:	(D- 60-62; D 63-67; D+ 68-69)
F:	(F 59-0)

Schedule

Date	Topic	Assignments	Important Events
July 2	Class Overview Chapter 1. The Story of Chemistry	2,10,14,16,20,22,24,26, 28,30,32,34,38,42,44,46	
July 3	Chapter 2. Atoms	2,4,6,8,14,16,18,22, 24,26,34,36,42,44,46,48	
July 4	Chapter 3. Everything	2,4,6,8,10,12,14,16,18,20,22,24, 26,28,36,38,40,42,44,46,48,50	Last day to add or drop
July 5	Chapter 4. Bonds	2,4,8,10,12,16,20,26,28, 30,32,34,36,38,42,44,46,48	
July 6	Recitation		Ch. 1-4 HW Due
July 9	Hour Exam 1	Exam on Ch. 1-4	
July 10	Chapter 5. Carbon	2,4,6,12,14,16,18,20,24,26, 30,34,36,38,40,42,44,46,48,50	
July 11	Chapter 6. Air	2,4,6, 8,10,14,16,18,24,26,28, 30,32,36,40,42,44,46,48,50	

July 12	Chapter 7. Chemical Reactions	2,6,8,10,12,14,16,20,22,26,28,30, 32,34,36,38,40,42,44,46,48,50	
July 13	Recitation		Ch 5-7 HW Due
July 16	Hour Exam 2	Exam on Ch. 5-7	
July 17	Chapter 8. Water	2,4,8,10,16,18,20,22,24,26,28,30, 32,36,40,42,44,46,48,50	
July 18	Chapter 9. Salts and Aqueous Solution	4,6,8,10,12,14abc,16,20,24,26,28, 30,32,34,36,38,40,42,44,48,50	
July 19	Chapter 10. pH and Acid Rain	2,4,8,10,12,14,16,18,20,22,24,26, 32,34,36,38,40,42,44,46,50	
July 20	Recitation		Ch 8-10 HW Due
July 23	Hour Exam 3	Exam on Ch. 8-10	
July 24	Chapter 11. Nukes	2,4,6,10,12,14,16,18,20,22,24,26, 28,30,32,34,36,38,40,42,44,46,48, ,50	Last day to withdrawal
July 25	Chapter 12. Energy, Power, and Climate Change	2,4,6,10,12,14,16,18,20,22,24,26, 28,30,32,34,38,40,42,44,46	
July 26	Chapter 13. Sustainability and Recycling	2,6,8,10,12,14,20,22,24,26,28,30, 34,36,38,40,42,44,46,48,50	
July 27	Chapter 14. Food	2,4,6,8,10,12,14,16,18,20,22,24,2 6,28,30,36,38,40,42,44,46,48,50	
July 30	Recitation		Ch 11-14 HW Due
July 31	Presentation		
Aug. 1	Presentation/Review		
Aug. 2	Final Exam		
Aug. 3	Farewell Day		