HOSTOS COMMUNITY COLLEGE

Natural Sciences Department
Physical Sciences Unit
FALL/SPRING XXXX

CHE110 Introduction to General Chemistry
Credits: 4.0 Hours: 3 Lecture; 2 Lab; 1 Recitation

Meets:	Rm Axxx	Tu and Th	05:30-08:15 pm, Lecture
	Lab Axxx	M and W	05:30- 07:10 pm, Laboratory
	Lab Axxx	M and W	07:30- 08:20 pm, Recitation
Email:	XXXXXXXX		
Office:	Room A507, by appointment		
Phone:	1-718-517-41XX		
Contact Policy:	Office hours: By appointment. If the student shows up late to the appointment time it can be cancelled according to the instructor criterion.		

COURSE DESCRIPTION:

The student will solve problems and analyze data which require knowledge of the General Chemistry and Inorganic Chemistry which include principles of Scientific Measurements, Atomic Theory, Chemical Bonding, Nuclear Chemistry, Gas Laws, Solutions and concept of Acids & Bases. The student will also recognize the introductory knowledge of different classes of Organic Compounds. This course is a requirement for entry into the Dental Hygiene Program. Offered in English only.

Pre-requisite : MAT 10 or satisfactory performance on Math skills test

Co-requisite : MAT 20 or satisfactory performance on Math skills test

Course Objectives:

- Students will develop the capabilities to solve problems by combining several concepts in chemistry.
- Students will develop the techniques to think critically about a problem, devise a strategy for solving it, and assess whether the results make sense.
- Students will be able to relate chemistry to all areas of science.
- Students will be able to unify the diverse topics of chemistry.

Required textbooks:

1. Timberlake, K. C., Chemistry, An Introduction to General, Organic and Biological Chemistry, 12th Ed, Pearson, 2015 ISBN-10: 0-321-90844-9
2. Timberlake, K.C., Laboratory Manual, An Introduction to General, Organic, and Biological Chemistry, Custom Ed, Benjamin Cummings, 2010

A. LECTURE

WEEK	CHAPTER	SECTION	QUESTIONS & PROBLEMS (ODD NUMBERS)
1	1. Measurements	1.1-1.4	1.3, 1.4 -1.35, 1.5-1.7, 1.36-1.42, 1.45-1.56, 1.66
2	2. Energy and Matter	2.1-2.6	2.3-2.7(b,d), 2.9-2.17, 2.19(a,c), 2.21(a,c), 2.23, 2.29(a,c), 2.33, 2.35
3	3. Atomic Structure (Atoms & Elements)	3.1-3.8	3.1-3.25, 3.29-3.35, 3.39(a,c), 3.41(b,d), 3.45-3.49, 3.53(b,c), 3.55, 3.59(c,d), 3.65,3.71, 3.71
4	4. Compounds and Their Bonds	4.1-4.4	4.3-4.7, 4.11, 4.25-4.29, 4.35,
	EXAM I - CHAPTERS 1, 2 AND 3		
5	4. Compounds and Their Bonds	4.5-4.7	4.39, 4.43, 4.47, 4.49, 4.55, 4.65, 4.67
6	9. Nuclear Reactions	9.1-9.9	9.1-9.9, 9.13, 9.17, 9.19, 9.27, 9.31, 9.35, 9.41, 9.49, 9.55
6	5. Chemical Reactions and Quantities	5.1-5.5	5.1-5.27
7	5. Chemical Reactions and Quantities	5.6-5.9	5.29-5.41, 5.47(a,c) 5.53(a,b), 5.55(a), 5.57(a,c) 5.63),)
8	6. Gases	7.1-7.5	6.3-6.7, 6.15-6.19, 6.27-6.33
	EXAM II - CHAPTERS 4, and 9		
9	6. Gases	7. 6-7.8	6.35-6.53, 6.57-6.65
10	7. Solutions	7.1-7.4	7.1, 7.7-7.19, 7.25, 7.31-7.35, 7.39(a), 7.41
11	7. Solutions	7.5-7.7	7.43-7.47, 7.53(a,c), 7.57, 7.59
	EXAM III - CHAPTERS 5 AND 6		
12	8. Acids and Bases	8.1-8.7	8.1-8.11, 8.15, 8.19,8.23, 8.25(a,d), 6.27, 8.33, 8.37, 8.39,

			8.45, 8.47, 8.57, 8.63
13	**10. Introduction to Organic Chemistry**	**10.1-10.5**	**10.1-10.5, 10.11, 10.21, 10.25, 10.29, 10.33**
	EXAM IV- Chapters 7 and 8		
14.	**11. Unsaturated Hydrocarbons Organic Chemistry**	**11.1-11.5**	**11.1-11.5, 11.7, 11.11, 11.15, 11.23**
	12. Organic Compounds with oxygen and sulfur	**12.1-12.6**	**12.1-12.6, 12.10-12.22, 12.30, 12.32-12.42**
15.	**FINAL CUMULATIVE EXAMINATION**		

Cumulative Exam (sections covered from Chapters 1 to 12). Date and time: Tuesday May 19 at 05:30 pm in Room A438

B. Laboratory

WEEK	TITLE	EXPT.#	PAGE
1	Drawer assignment Discussion of Safety Rules for Laboratory Sessions Attendance and Grading Policies		
	Conversion Factors in Calculations Procedures **A - G**	2	11
2	**Measurement: Length and Volume** Procedure **A** & **B**	1	1
3	**Measurement: Mass** Procedure **C**	1	6
4	**Density and Specific Gravity** (Omit Part **D**)	3	25
5	**QUIZ #1**		
	Graphing Mass and Volume	3D	26

WEEK	TITLE	EXPT.#	PAGE
6	**Electron Configuration and Periodic Properties**	5	41
	Atomic Structure (Assign as homework if time runs out)	4	33

7	**Chemical Reactions and Equations**	10	97
8	**QUIZ #2**		
	Partial Pressures of Oxygen and Nitrogen (**A.1** only)	14	139
	Compounds and Their Formulas (Assign as homework if time runs out)	7	59
9	**Partial Pressures of Oxygen and Nitrogen** (**A.2** to **A.6**)	14	140
	Solutions, Electrolytes and Concentration (**B** - Demonstrated by Instructor)	15	147
10	**Solutions, Colloids and Suspensions** NOTE: **Set up "Figure 18.1"** before starting Procedure **A**	18	177
11	**Acids, Bases, pH and Buffers**	19	185
12	**QUIZ #3**		
	Acid-Base Titration Procedure **A** (**B** may be done by the Instructor)	20	193
13	**Structures of Alkanes** (Request the Handbook of Chemistry & Physics)	22	211
14	**QUIZ #4**		
	Reactions of Hydrocarbons **(Bromine Test by Instructor)**	23	223
	CLEAN UP AND CHECK OUT		
15	**Final Lab Exam: Thursday May 21 5:30-07:10 pm Lab A520**		

GRADING POLICY

The laboratory grade will contribute 25% towards the final grade. Laboratory attendance is compulsory. Laboratory sessions will begin at the scheduled hour. There will be ***no*** make ups.

EYE PROTECTION

NO ONE will be allowed in the laboratory without safety glasses. Glasses ***MUST BE WORN AT ALL TIMES*** while working in the lab.

Graded assignments: The Final grade will be determined by the grades on lecture and lab combined as follows:

Lecture	**75%**
4 Partial Exams	45%
Final Exam	20%
Assignments*	10%
Laboratory	**25%**
8-10 Lab Reports + Quizzes	15%
(Points will be taken off for *each report that is handed in late*.)	
Final Lab Exam	10%
Total Grade Course	**100%**

No student under any circumstances will be given a passing grade in this Chemistry course without taking and passing the laboratory.

***Assignments (10%): The required problems for each chapter must be provided to the instructor the date when the exam covering the corresponding chapters will be given. These problems will be graded automatically when using the Mastering Chemistry Program.**

Policy Grade:

The college uses the following grades:
A,A^- for excellent work
B^+, B, for good work
B^- , C, C^+ for fair work
D, for poor work
F, for failure
I, for incomplete
WU, for unfinished incomplete, equivalent to F
W, for withdrawn

The grade of Incomplete (I) is given in regular courses upon request of the student for personal emergencies that are verifiable. The faculty member has the responsibility to provide Inc grade only to those students **who are passing the course**. The student has the responsibility to take the initiative in completing the work, and is expected to make up the incomplete during the first semester in residence after receiving the grade of Incomplete. If the student does not make up the incomplete during the following semester after receiving it**, an F grade may be given by the faculty member without further consultation with the student.**

If after the end of the first semester the Inc remains on the record it will be designated as an F and will be computed in the student's GPA.

A	93-100
A^-	90-92
B^+	87-89
B	83-86
B^-	80-82
C^+	77-79
C	70-76
D	60-69
F	Failure

There is no R grade in this course.

Lecture and Lab

Participation:

Your participation in class is an important part of the final grade. This grade is based primarily on your participation in class discussions, in team projects and your attendance. For each class you miss, you will lose participation points. If you miss 25% or more of the term, you will be failed.

Academic policies:

Hostos Community College has an evaluation system based o the honesty and integrity of the academic work an identified student or students. Faculty, students and staff have the responsibility to uphold the standards of the community and to take action when others violate them. Faculty members have an obligation to educate students to the standards of academic integrity, and to report violations of these standards to the appropriate authorities of the college. If a community member is proved with academic dishonesty, the college will impose sanctions. The three most common forms of academic dishonesty are cheating, plagiarism, and bribery. It must be understood that any student who knowingly aids in plagiarism or other cheating, e.g., allowing another student to copy a paper or examination question, is as guilty as the cheating student

Cheating:

In the collegiate setting, cheating is defined as the purposeful misrepresentation of another's work as one's own. Faculty and students alike are responsible for upholding the integrity of this institution by not participating either directly or indirectly in act of cheating and by discouraging others from doing so.

Plagiarism:

Plagiarism is a form of cheating which occurs when persons, even if unintentionally, fail to acknowledge appropriately the sources for the ideas, language, concepts, inventions, etc. referred

to in their own work. Thus, any attempt to claim another's intellectual or artistic work as one's own constitutes an act of plagiarism.

Bribery:

In the collegiate setting, bribery involves the offering, promising, or giving of items of value, such as money or gifts, to a person in a position of authority, such as a teacher, administrator, or staff member, so as to influence his/her judgment or conduct in favor of the student. The offering of sexual favors in exchange for a grade, test score, or other academic favor, shall be considered attempted bribery. The matter of sexual favors, either requested or offered, in exchange for a grade, test score or other academic favor shall also be handled as per the Sexual Harassment procedures of the College.

Use of **Cellular Phone** is not allowed both in the classroom, laboratories, and in the hallway.