

HOSTOS COMMUNITY COLLEGE
NATURAL SCIENCES DEPARTMENT
PHYSICAL SCIENCE UNIT

CHE 320 : ORGANIC CHEMISTRY II **Code :** **Sec :** **Session :**

3 credits. 3-hr. lecture; 1-hr. recitation

Instructor :

Meets :	Lecture :	Room :
Email :		
Office hours :		
Phone :	718-518-	

Course Description : This course will provide the student with a thorough understanding of the detail concepts of organic chemistry. Molecular structure and bonding will be introduced at a theoretical level. Students will become familiar students with molecular orbitals and their use in understanding chemical phenomena. Knowledge of different branches of organic chemistry, stereochemical (3-dimensional) aspects of structure; strategies of organic synthesis will be emphasized by means of problem solving. This course is intended for chemistry, biochemistry, molecular biology, chemical engineering, and other students on scientific or professional career paths.

Prerequisite : CHE 310

Required Text : Organic Chemistry, 7th Ed., L.G. Wade, Jr., Prentice Hall, Inc. ISBN: 0-13-147871-0

Recommended Materials : Solutions Manual, 6th ed., Jan W. Simek, Prentice Hall

Course Objectives :

By the end of the course, students will ;

- Know the principles of organic chemistry: naming, reaction mechanism, physical and chemical properties of the different organic chemistry families.
- Recognize organic compounds based in the principal functional groups.
- Reinforce their independent study skills.
- Understand the reaction mechanisms of synthesis and addition in organic chemistry.
- Analyze the biological and chemical implications of oxidation and reduction of organic compounds
- Use IR, UV, NMR and Mass spectroscopy for characterization purposes of organic compounds
- Role of organic molecules in biochemical system will be studied.

Course Schedule

<u>WEEKS</u>	<u>CHAPTERS</u>	<u>PAGES</u>
1	Chapter 14: Properties of ethers, epoxides and sulfides	623-655
2	Chapter 15: Conjugated systems, orbital symmetry Diels-Alder reaction Ultraviolet spectroscopy	663-679 680-690 692-698
3	Chapter 16: General introduction and properties of aromatic compounds	705-735
4	Chapter 17: Reactions of aromatic compounds: Electrophilic aromatic substitution, halogenation, nitration and sulfonation of benzenes Nucleophilic aromatic substitution Addition reactions of benzene derivatives Reactions of phenols	749-784 785-794
5	1st Exam: Chapters 14, 15, 16 and 17	
5	Chapter 18: Introduction and reactions of aldehydes and ketones	805-855
6	Chapter 19: General preparations and properties of Amines	870-908
7	Chapter 20: Synthesis and properties of carboxylic acids	935-968
8	Chapter 21: Different reactions of carboxylic acid derivatives	978-1025
9	2nd Exam: Chapters 18, 19, 20 and 21	
9	Chapter 22: Condensation and substitution reactions of carbonyl compounds	1041-1085
10	Chapter 23: Carbohydrates and nucleic acids	1097-1145
11	Chapter 24: Amino acids, proteins and peptides	1154-1190
12	3rd Exam: Chapters 22, 23 and 24	
13	Chapter 25: Lipids	1200-1215
14	Chapter 26: Stereochemistry of polymers	1222-1236
15	Final Exam: Chapters 14-26	

Homework Problems : The assigned problems are a very important part of the course. The student is responsible for all problems within and at the end of each chapter. They provide the student with practice for examinations. Problems will be reviewed in the weekly recitation, not in the lecture class. Since it will not be possible to cover the problems during recitation, the student is urged to attempt all the problems first and present only those with which you had difficulty. Make every effort to keep up with the pace of the class. Take full advantage of office hours and free tutoring at the Academic Learning Center.

Exams: There will be three partial exams during the course of the semester; these are indicated in the course schedule covering 60% of the course grade. There will be pre-scheduled makeup exams. **There will be weekly quizzes (include instant assignments), which will account for 10% of the final grade.** During final exam week, there will be a comprehensive final examination covering the entire semester's material; the final exam accounts for 30% of the course grade.

Grading :

3 Partial Examinations :	60%
Weekly Quizzes participations / Attendance :	10%
Comprehensive Final :	30%

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.

Grade GPA Value

A	93-100%	4
A ⁻	90-92%	3.7
B ⁺	87-89%	3.3
B	83-86%	3
B ⁻	80-82%	2.7
C ⁺	77-79%	2.3
C	70-76%	2
D	60-69%	1
F	below 60%	0

There is no R grade in this course.

Lecture and Recitation Participation :

Your participation in class is an important part of the final grade. These portions of the grade are based primarily on attendance, participation in class discussions and team projects, and on general cooperation in the learning process. For each class you miss, you will lose participation points. If you miss 10% or more of the term, you will fail the course.

Academic Integrity :

Hostos Community College believes that developing student's abilities to think through issues and problems by themselves is central to the educational process. Since the Hostos College degree signifies that the student knows the material s/he has studied, and the practice of academic dishonesty results in grades or scores that do not reflect how much or how well the student has learned, understood, or mastered the material, the College will investigate any form of academic dishonesty brought to its

attention. If the charge of academic dishonesty is proved, the College will impose sanctions. The three most common forms of academic dishonesty are cheating, plagiarism, and bribery.

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 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. 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.

If you are suspected of plagiarism or cheating or if you attempt to bribe or influence your professor, you will be immediately reported to the college's Academic Integrity Officer. You will be unable to drop the class. The penalties range from an F with a score of 0 for an assignment to Failure for the entire term to expulsion from The City University of New York.

Students are expected to attend all class meeting in the courses for which they are registered. Classes begin at the times indicated in the official schedule of classes. Arrival in class after the scheduled starting time constitutes lateness.

The maximum number of absences is limited to 15% of the number of scheduled class hours per semester and a student absent more than the indicated 15% is deemed excessively absent. Attendance is monitored from the first official day of classes. In the case of excessive absences or lateness, the instructor has the right to lower the grade, assign a failing grade, or assign additional written work or readings.

Absences due to late registration, change of program, or extenuating circumstances will be considered on an individual basis by the instructor. Each department and program may specify in writing a different attendance policy. Instructors are required to keep an official record of student attendance and inform each class of the College's or Department attendance policy.