

CHEMISTRY 240-11
ORGANIC CHEMISTRY I SYLLABUS

Fall 2001, Xavier University

Instructor: Dr. Daniel J. McLoughlin
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Office Hours: MF 10:30-11:20, TTh 9:00-10:00, and by appointment

Prerequisite: One full year of General Chemistry plus Laboratory

Corequisite: CH241, Organic Chemistry Laboratory I, 1 credit hour, 3.5 contact hours

Format: Three 50 minute lectures per week, 9:30 • 10:20 am MWF, 3 credit hours lecture, 1 cr hour lab.

Description: The first semester of a full year course in organic chemistry. This course is an introduction to the structure, bonding, reactions, and properties of organic compounds.

Rationale: This course has been approved for an American Chemical Society Certified Degree program. It is intended for students majoring in Chemistry, Biology, Natural Sciences, or those seeking entry into health professional programs. This course applies toward the requirements for entry into medical, dental, and veterinary schools.

Required Text: Graham Solomons, Craig Fryhle, "Organic Chemistry, 7th Edition", Wiley, 2000. Problem solution book and molecular model kit suggested.

Attendance: Regular attendance in this lecture class is recommended but not required and roll will not be taken.

Examinations: Examination dates are listed on the attached schedule. Students are responsible for taking the examinations at the scheduled times. Exceptions are made only for good cause and if arrangements are made in advance. Normally a make•up exam will not be allowed. Normal policy is that if a student does miss a single exam (except the final exam), the student will be given the class average for that single exam or the student's current class test average, **WHICH EVER IS LOWER**. Also an explanation as to why you missed the exam must be submitted in writing. **ALL STUDENTS MUST TAKE THE FINAL EXAM.**

Evaluation of student performance in this section will be based as follows:

Five tests, each constituting 20% of the final grade.
The final examination, TEST 5, will not be comprehensive.

Grades: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: Below 60. This grading scale is subject to downward reevaluation depending on overall class performance.

It should be noted that according to the Xavier University Catalog, a grade of "A" is earned for "Exceptional" performance. This is also the agreed grading policy of the faculty in the Chemistry Department.

Academic Misconduct Policy: A zero grade will be given to any student violating the University Academic Honesty Policy. The student may appeal according to normal university procedures as stated in the University Catalog.

It is the responsibility of the student to inform the instructor at the beginning of the semester of any individual conditions, medical or otherwise, that may require special attention. Appropriate consideration will be given in these situations.

The schedule and procedures in this course syllabus are subject to change in the event of extenuating circumstances. These changes, if necessary, will be announced to the class in as timely a manner as possible.

ORGANIC I SCHEDULE

W 8/29	Chapter 1	Introduction, Atomic Orbitals	
F 8/31	Chapter 1	Molecular Orbitals	
M 9/3	No Classes	Labor Day Holiday	
W 9/5	Chapter 1	Hybridization	
F 9/7	Chapter 2	Shapes of Molecules	
M 9/10	Chapter 2	Polar Bonds, Polar Molecules	
W 9/12	Chapter 2	Functional Groups	
	F 9/14	Chapter 2	Physical Properties and Molecular
		Structure	
	M 9/17	Chapter 3	Acid Base reactions in Organic
		Chemistry	
	W 9/19	Chapter 3	Relative Base strengths
F 9/21	TEST 1	Chapters 1,2 and 3(part)	
M 9/24	Chapter 4	Alkane Nomenclature	
W 9/26	Chapter 4	Sigma bond rotation	
M 9/28	Chapter 4	Ring Strain	
M 10/1	Chapter 4	Conformations of cyclic compounds	
W 10/3	Chapter 4	Polycyclic compounds	
	F 10/5	No Classes	Autumn Holiday

M 10/8	Chapter 5	Stereochemistry
W 10/10	Chapter 5	Stereocenters and optical activity
F 10/12	TEST 2	Chapters 3(part), 4, and 5(part)
M 10/15	Chapter 5	Diastereomers
W 10/17	Chapter 5	Synthesis of Chiral Compounds
F 10/19	Chapter 5	Diastereomers
M 10/22	Chapter 6	Nucleophilic Substitution Reactions
W 10/24	Chapter 6	S _N 1 vs. S _N 2 Reactions
F 10/26	Chapter 6	Nucleophiles
M 10/29	Chapter 6	Leaving Groups
W 10/31	Chapter 6	Eliminations
F 11/2	Chapter 6	Substitution vs. Elimination
M 11/5	TEST 3	Chapters 5 and 6
W 11/7	Chapter 7	Synthesis of Alkenes and Alkynes
F 11/9	Chapter 7	Stereochemistry of Elimination Reactions
M 11/12	Chapter 7	Terminal alkynes in Synthesis
W 11/14	Chapter 8	Addition to double and triple bonds
F 11/16	Chapter 8	Rearrangements in chemistry of additions
M 11/19	Chapter 8	Stereochemistry of addition reactions
	W 11/21	No Classes Thanksgiving Holiday
	F 11/23	No Classes Thanksgiving Holiday
M 11/26	Chapter 8	Oxidation of Alkenes and Alkynes
W 11/28	Chapter 9	NMR spectral analysis
F 11/30	TEST 4	Chapters 7 and 8
M 12/3	Chapter 9	NMR spectral analysis
W 12/5	Chapter 9	NMR splitting patterns
F 12/7	Chapter 9	Carbon NMR
M 12/10	Chapter 9	Mass Spectrometry
W 12/12	Chapter 10	Free Radical Reactions
F 12/14	Chapter 10	Selectivity in Free Radical Reactions

FINAL EXAM - W 12/19 - EXAM 5, 8:30 - 10:20pm

Other Significant Dates

Monday, October 22 - Midterm Grades Due.

Thursday, November 26 - Final Date to Withdraw Without Failure.